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Charting International Labor Comparisons (2012 Edition)

Abstract

[Excerpt] With ever-expanding global markets, international labor statistics have assumed a greater role in assessing the relative performance of individual economies and in influencing both national and international policy decisions. However, direct comparisons of statistics across countries can be misleading because concepts and definitions often differ. To improve the comparability of international labor statistics, the International Labor Comparisons (ILC) program of the Bureau of Labor Statistics (BLS) adjusts data to a common conceptual framework.

The 2012 edition of *Charting International Labor Comparisons* features 2010 data, and data trends over time, for the main indicators published by ILC: gross domestic product, labor force, manufacturing hourly compensation costs and productivity, and consumer prices. Country coverage varies by chart and is based primarily on data available from the ILC program; however, to increase country and indicator coverage, this chartbook also uses data from other organizations. (Notes are provided at the end of each section to detail sources used and to furnish helpful definitions.)

Keywords

Bureau of Labor Statistics, labor markets, manufacturing, productivity, international comparison, prices

Comments

Suggested Citation

Bureau of Labor Statistics. (2012). *Charting international labor comparisons*. Washington, DC: Author.

2012 EDITION

Charting International Labor Comparisons

U.S. Department of Labor • Bureau of Labor Statistics





2012 EDITION
**Charting International Labor
Comparisons**

U.S. Department of Labor
Hilda L. Solis, *Secretary*

U.S. Bureau of Labor Statistics
John M. Galvin, *Acting Commissioner*

September 2012

PREFACE



With ever-expanding global markets, international labor statistics have assumed a greater role in assessing the relative performance of individual economies and in influencing both national and international policy decisions. However, direct comparisons of statistics across countries can be misleading because concepts and definitions often differ. To improve the comparability of international labor statistics, the [International Labor Comparisons](#) (ILC) program of the Bureau of Labor Statistics (BLS) adjusts data to a common conceptual framework.

The 2012 edition of *Charting International Labor*

Comparisons features 2010 data, and data trends over time, for the main indicators published by ILC: [gross domestic product](#), [labor force](#), manufacturing [hourly compensation costs](#) and [productivity](#), and [consumer prices](#). Country coverage varies by chart and is based primarily on data available from the ILC program; however, to increase country and indicator coverage, this chartbook also uses data from other organizations. (Notes are provided at the end of each section to detail sources used and to furnish helpful definitions.)

For the latest ILC key indicators by country, see the [Country at a Glance](#) feature at www.bls.gov/ilc.

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A satellite with two large solar panel arrays is shown in orbit above the Earth. The satellite's body is cylindrical with various instruments and antennas. The solar panels are rectangular and composed of many small square cells. The Earth's surface is visible in the background, showing blue oceans and white clouds. The title 'ACKNOWLEDGMENTS' is overlaid in large white letters on a dark grey rectangular background at the top of the page.

ACKNOWLEDGMENTS

This edition of *Charting International Labor Comparisons* was prepared by the BLS International Labor Comparisons (ILC) program, under the coordination of Elizabeth Crofoot and Jacob Kirchmer and the overall guidance of Marie-Claire Sodergren and Chris Sparks. ILC team members are Amy Bixler, Aaron Cobet, Rich Esposito, Mubarka Haq, Christopher Morris, Bradley Nicholson, and Andrew Petajan. Cover art and layout design were created by Bruce Boyd, and editorial services were provided by Maureen Soyars, both of the Office of Publications and Special Studies.

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1 SECTION

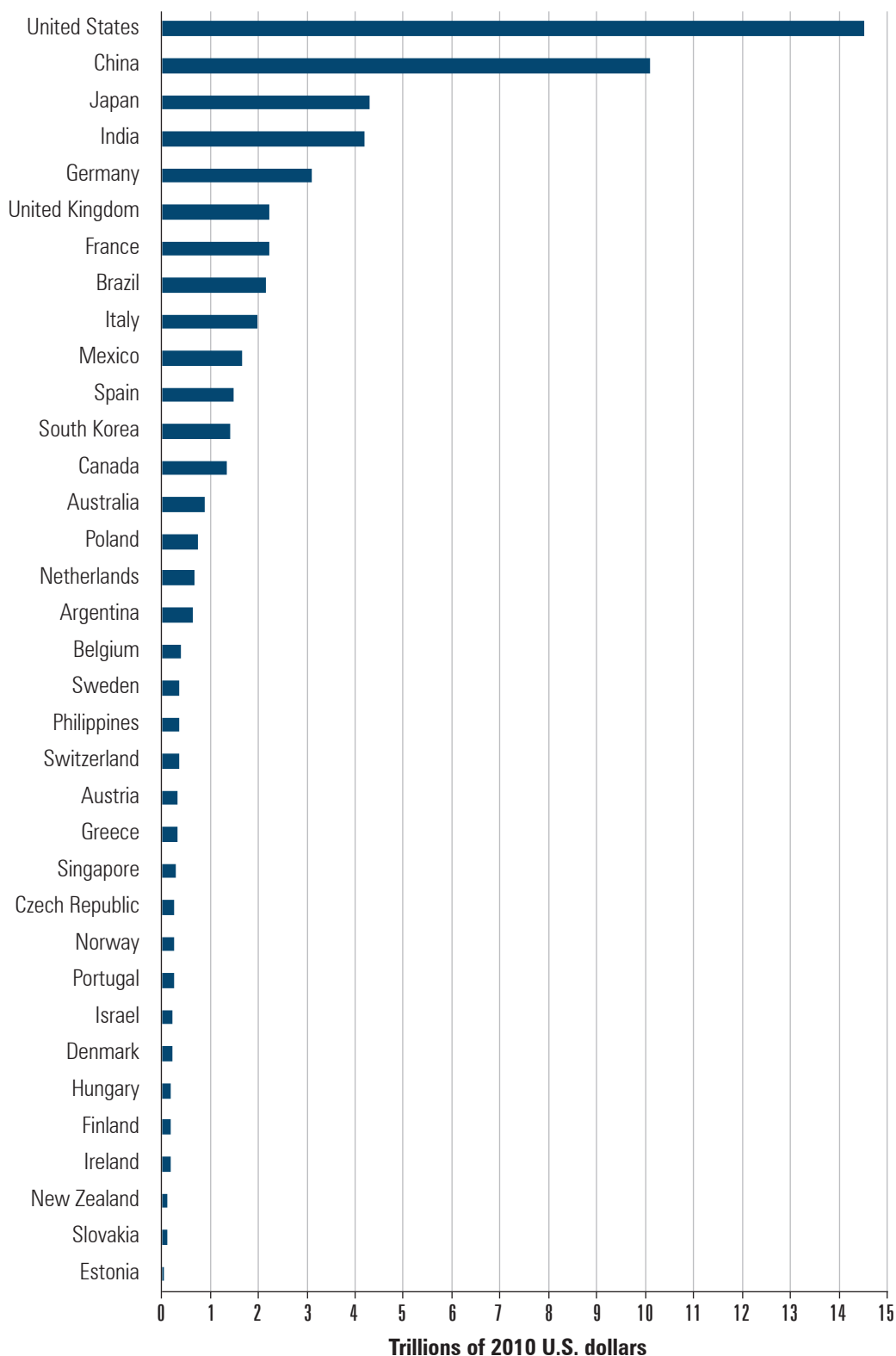
Gross Domestic Product

Gross domestic product (GDP) is a measure of a country's economic output. GDP per capita and GDP per employed person are related indicators that provide a general picture of a country's well-being. GDP per capita is an indicator of overall wealth in a country, and GDP per employed person is a general indicator of productivity.

Gross domestic product, selected countries, in U.S. dollars, 2010

CHART 1.1

Gross domestic product (GDP) was more than 14 trillion dollars in the United States and exceeded 4 trillion dollars in only three other countries: China, Japan, and India.



- In addition to China and India, other large emerging economies, such as Brazil and Mexico, were among the 10 largest countries in terms of GDP.
- The GDP of the United States was roughly 5 times larger than that of Germany, 10 times larger than that of South Korea, and 40 times larger than that of the Philippines.

NOTE: GDP is converted to U.S. dollars using purchasing power parities (PPP). See section notes.

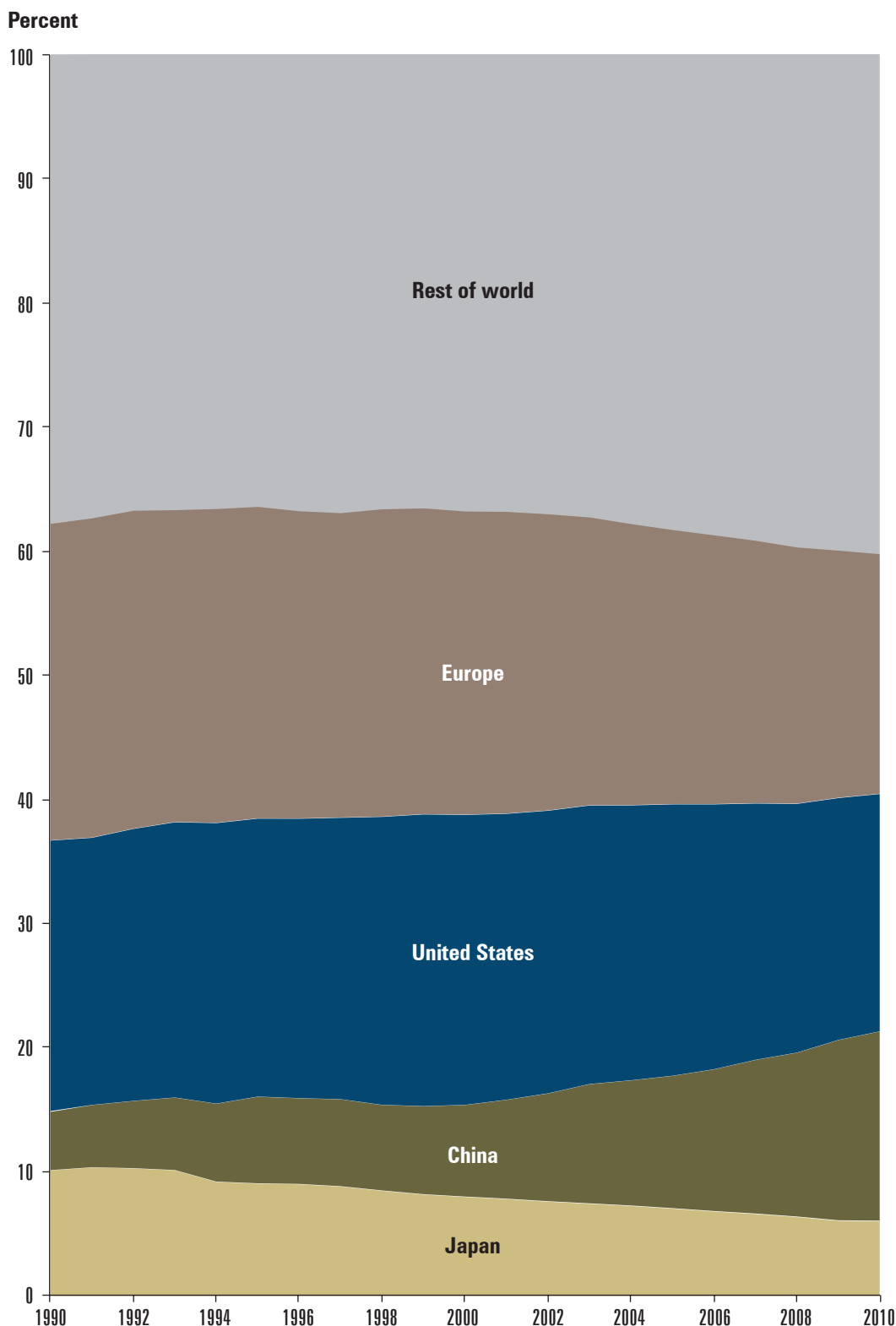
SOURCES: U.S. Bureau of Labor Statistics and The World Bank.

CHART 1.2

China's share of world gross domestic product (GDP) increased steadily during the past two decades, from approximately 5 percent in 1990 to 15 percent in 2010. By 2001, China's GDP had surpassed Japan's.

- As a percent of total world GDP, the United States, Europe, and Japan each declined slightly over the last two decades, largely because of China's growth.
- The rest of the world's share of world GDP changed little throughout the 1990s, but grew steadily from 2000 to 2010.

Share of world gross domestic product, selected economies, 1990–2010

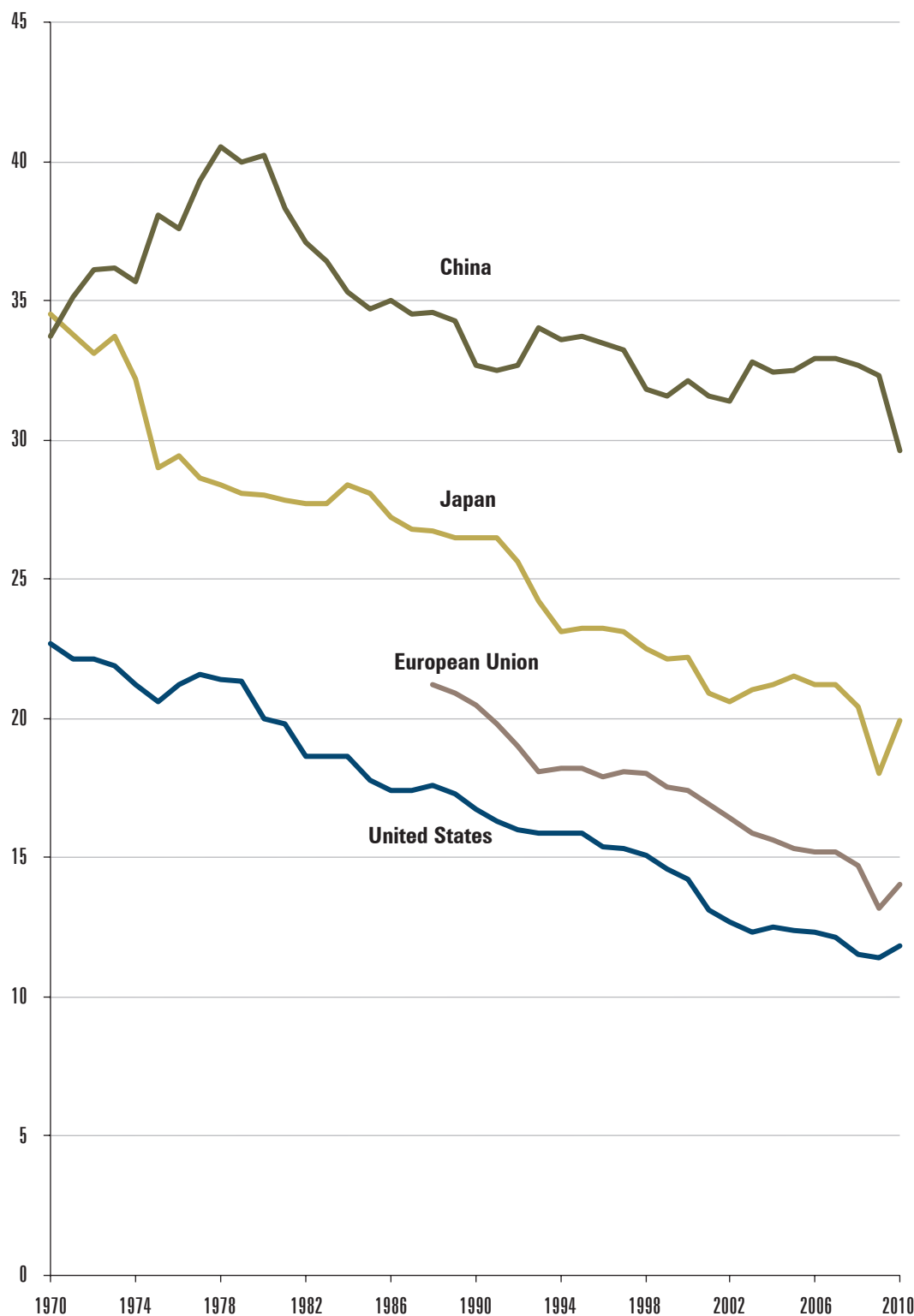


NOTE: Europe includes Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

SOURCE: The Conference Board.

Manufacturing output as a percent of gross domestic product, selected economies, 1970–2010

Percent



SOURCES: U.S. Bureau of Labor Statistics and The World Bank.

CHART 1.3

Between 1970 and 2010, the manufacturing sector's share of gross domestic product (GDP) declined at about the same rate in Japan, the European Union, and the United States.

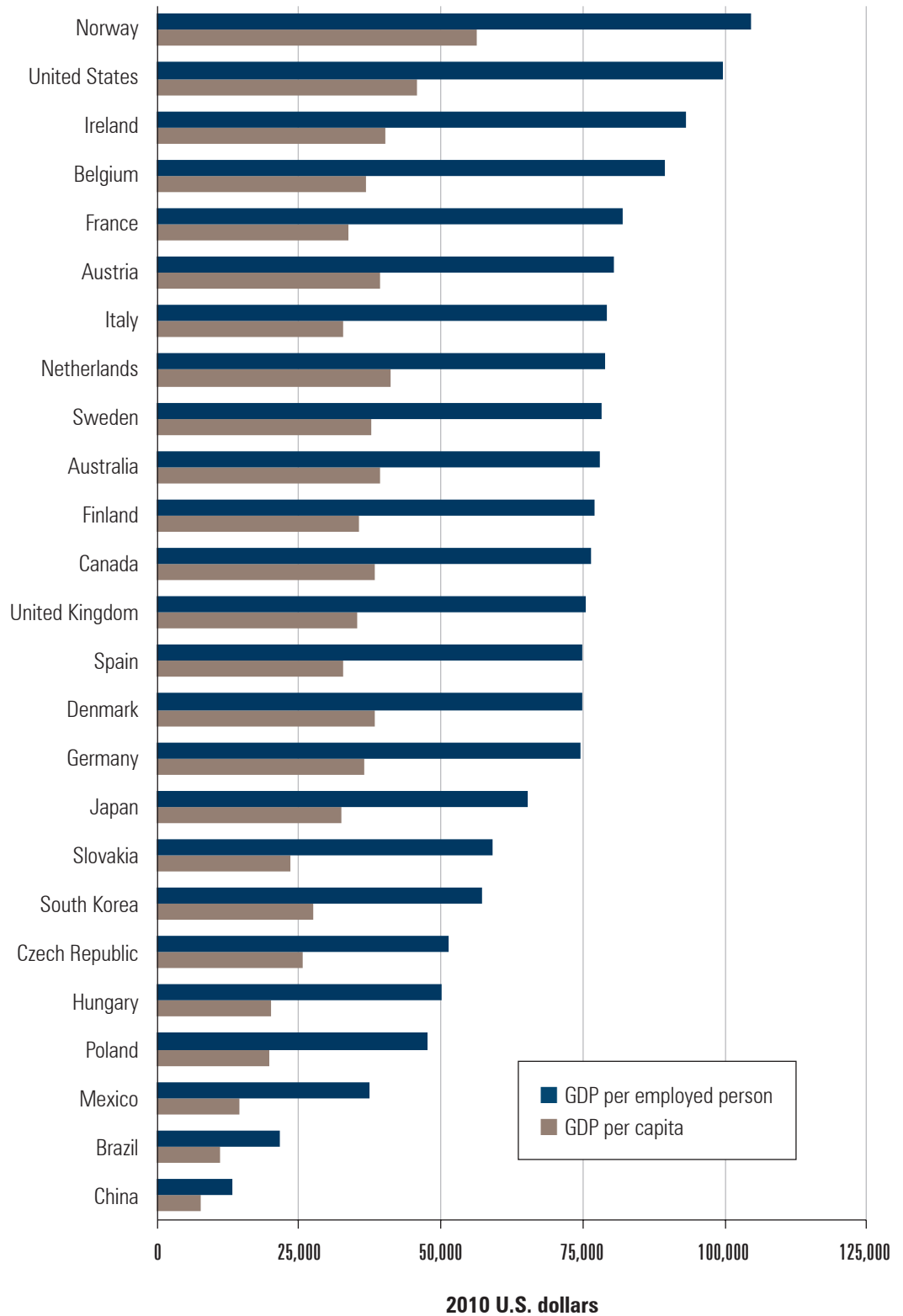
- From 2009 to 2010, after several years of overall decline, manufacturing output increased as a share of GDP in Japan, the European Union, and the United States.
- In China, manufacturing output as a share of GDP decreased from a peak of more than 40 percent in the late 1970s to less than 30 percent in 2010.

CHART 1.4

Gross domestic product (GDP) per capita in the United States was approximately six times larger than the GDP per capita in China.

- Norway had the highest GDP per capita and per employed person.
- Countries with the lowest employment-population ratios (see chart 2.5), such as Belgium, Hungary, and Italy, had relatively larger gaps between GDP per capita and per employed person.

Gross domestic product per capita and per employed person, selected countries, in U.S. dollars, 2010



SOURCES: U.S. Bureau of Labor Statistics and The World Bank.

Sources

Gross domestic product (GDP) data for most countries are based on the BLS report *International Comparisons of GDP per Capita and per Hour, 1960–2010*. GDP data for the remaining countries and all purchasing power parities (PPP) are based on data in the World Bank database *World Development Indicators*. A country or region's share of world GDP (chart 1.2) is based on data in The Conference Board *Total Economy Database*.

Each country prepares GDP measures in accordance with national accounts principles. To make international comparisons of levels of GDP, GDP per capita, and GDP per employed person, it is necessary to express GDP in a common currency unit. BLS converts GDP from national currency units to U.S. dollars through the use of PPP.

Definitions

Gross domestic product (GDP) is the market value of all goods and services produced in a country. **GDP per capita** is GDP divided by population and is a rough measure of a country's overall wealth. **GDP per employed person** is GDP divided by the number of employed persons and is a rough measure of a country's productivity. **Purchasing power parities** (PPP) are currency conversion rates that allow output in different currency units to be expressed in a common unit of value. A PPP is the ratio between the number of units of a country's currency and the number of U.S. dollars required to purchase an equivalent basket of goods and services within each respective country. ■



2 SECTION

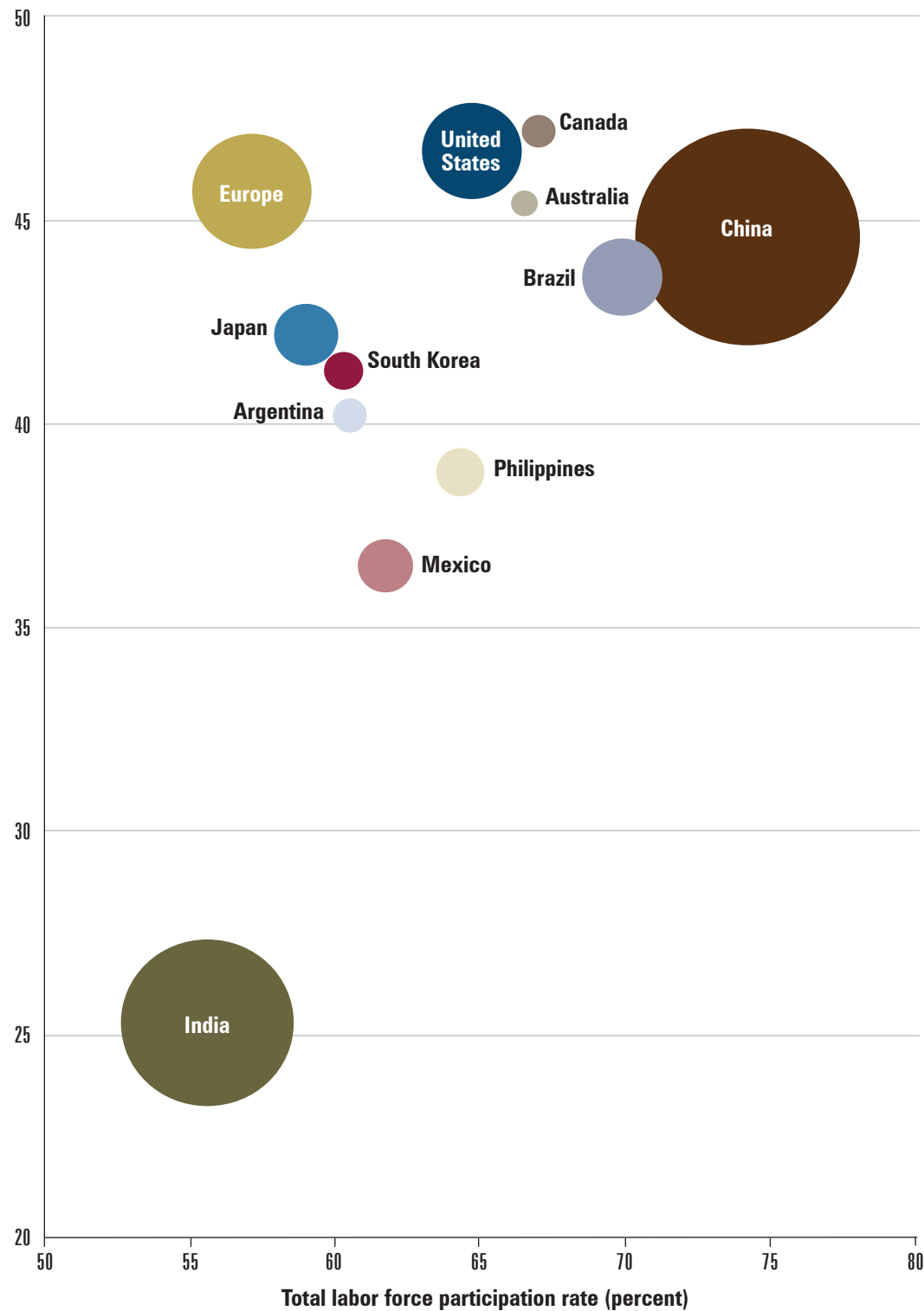


Labor Market

Labor force statistics, such as employment and unemployment, are key indicators of how labor markets are functioning within and across countries. Labor force levels and participation rates provide information on the supply of labor in an economy. Employment levels and employment-population ratios measure the extent to which people are engaged in productive labor market activities, while unemployment levels and rates provide information on an economy's unused labor supply.

Labor force size, gender composition, and participation rates, selected countries, 2010

Women's share of the labor force (percent)



NOTE: Each bubble represents the size of the labor force for that country. Europe includes Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

SOURCES: U.S. Bureau of Labor Statistics and International Labour Office.

CHART 2.1

China and India had the largest workforces; China had the highest labor force participation rate, while India had the lowest.

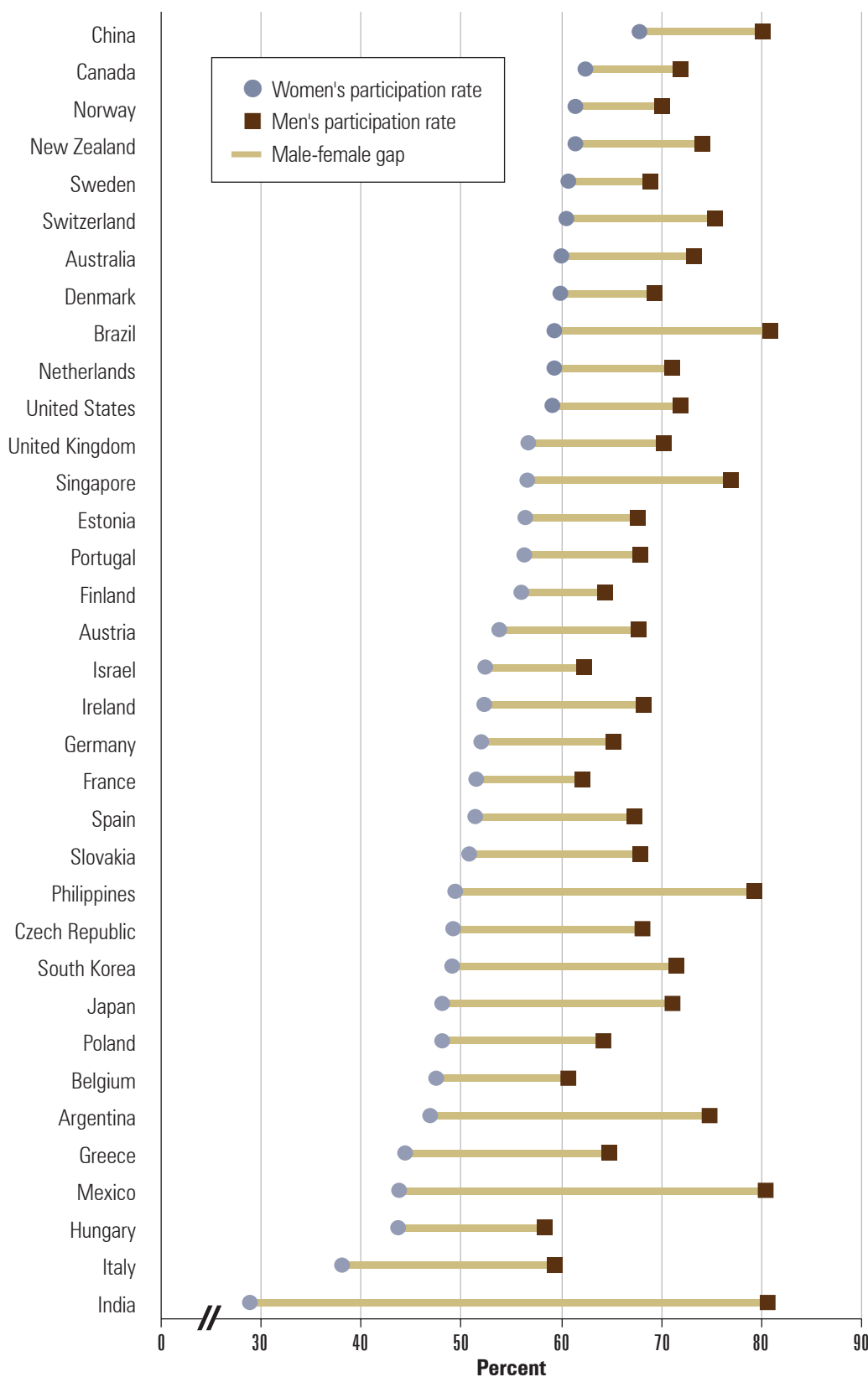
- Women made up less than half of the labor force in all selected countries and Europe. India had the lowest proportion of women in the labor market, by far.

CHART 2.2

Women's participation rates in India and Mexico were among the lowest, and these countries had the largest gender gaps.

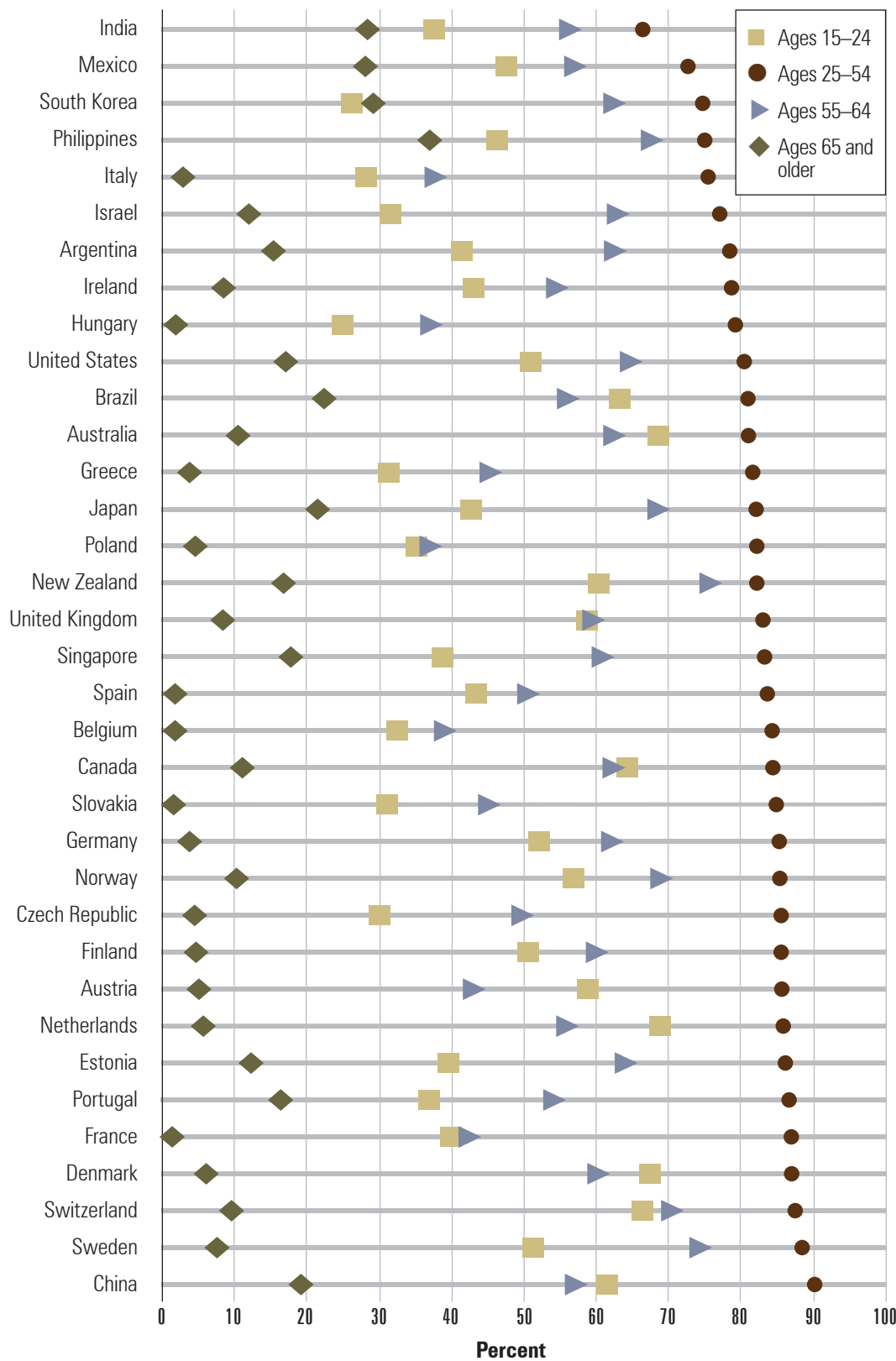
- Labor force participation rates were higher for men than women in all selected countries, although the size of the male-female gap varied considerably. The largest differences between men and women were in Asian and Latin American countries.
- The highest participation rates for men were in large emerging economies: Brazil, India, Mexico, and China. China also had the highest participation rate for women and, thus, a relatively low gender gap.

Labor force participation rates by sex, selected countries, 2010



SOURCES: U.S. Bureau of Labor Statistics and International Labour Office.

Labor force participation rates by age, selected countries, 2010



SOURCE: International Labour Office.

CHART 2.3

Participation rates were lowest for those ages 65 and older in all selected countries except South Korea.

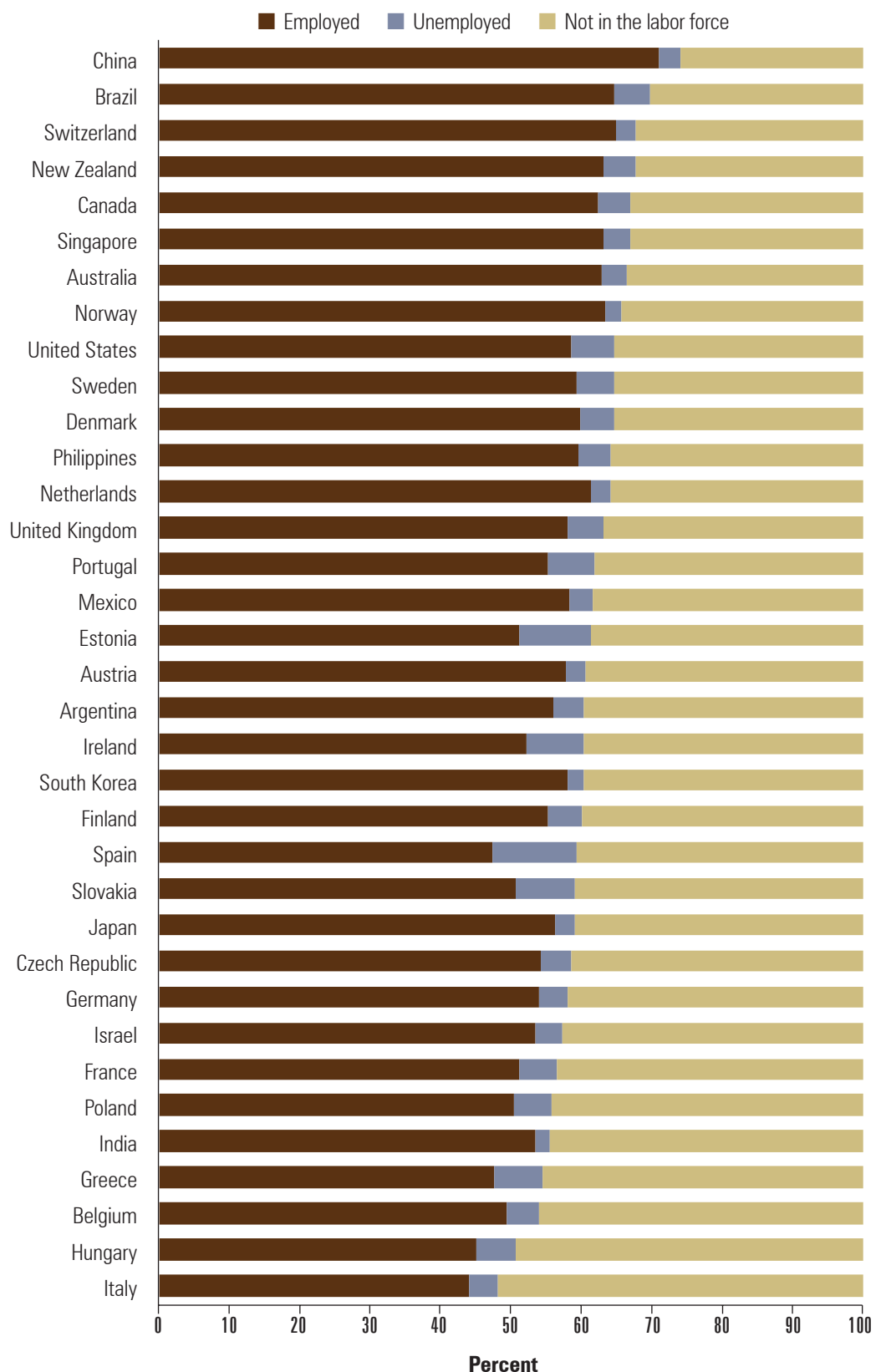
- In the Philippines, more than one-third of people ages 65 and older were still in the labor force. In contrast, many European countries had rates below 5 percent for this age group.
- Participation rates among youth (ages 15–24) varied most across countries. The Netherlands and Australia had the highest participation rates, and Hungary, South Korea, and Italy had the lowest rates.

CHART 2.4

The working-age population is composed of those in the labor force—the employed and the unemployed—and those not in the labor force.

- Italy was the only country with less than half of its working-age population in the labor force.
- High unemployment in Spain and Estonia led to employment rates similar to countries with lower labor force participation, such as Italy and Hungary.

Working-age population by labor force status, selected countries, in percent, 2010

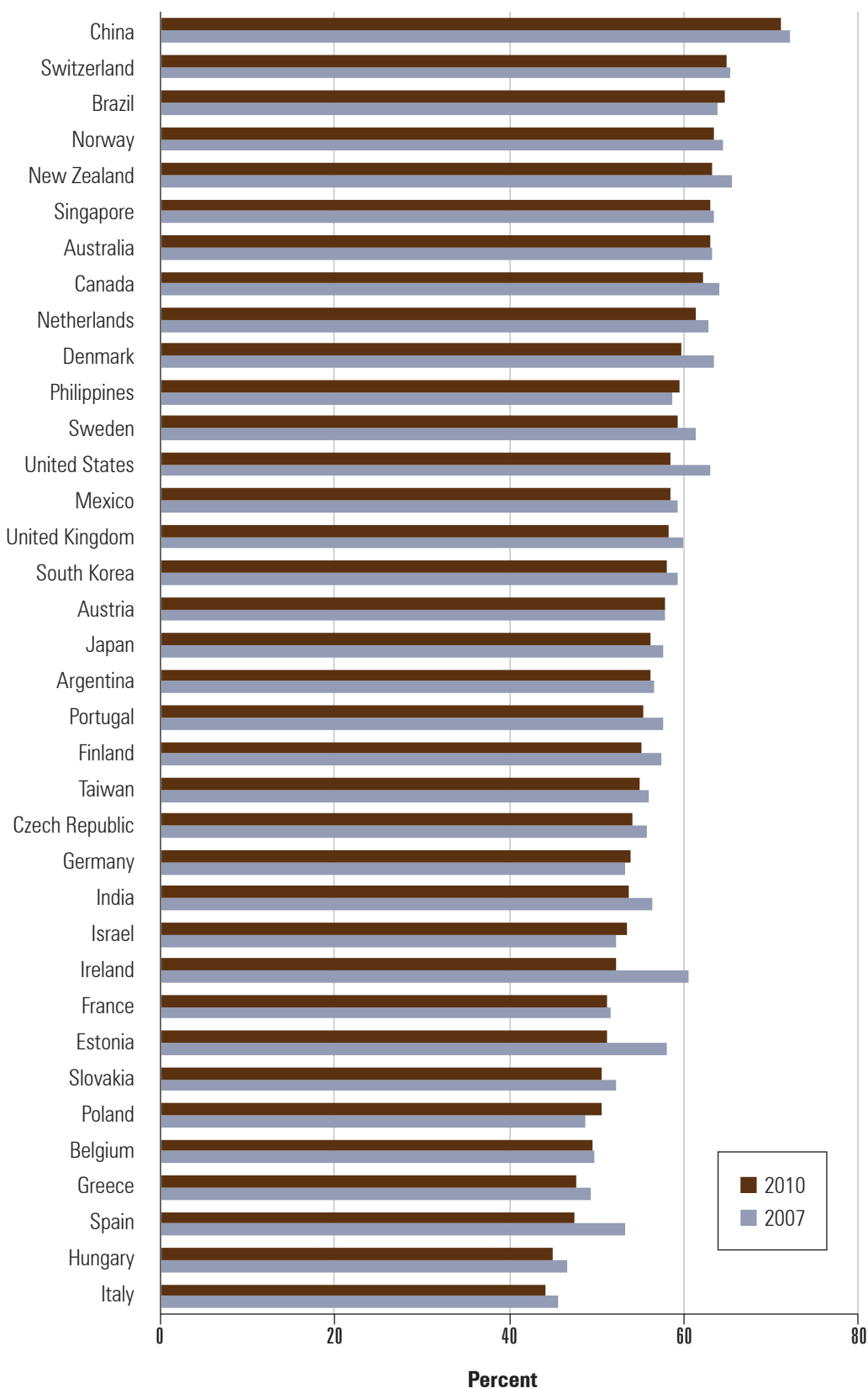


SOURCES: U.S. Bureau of Labor Statistics and International Labour Office.

Employment-population ratios, selected countries, 2007 and 2010

CHART 2.5

In 2010, China and Switzerland had the highest proportions of employed persons, while Italy and Hungary had the lowest.



- Employment-population ratios decreased between 2007 and 2010 in 30 out of 36 selected countries, with the steepest declines in Ireland, Estonia, Spain, and the United States.

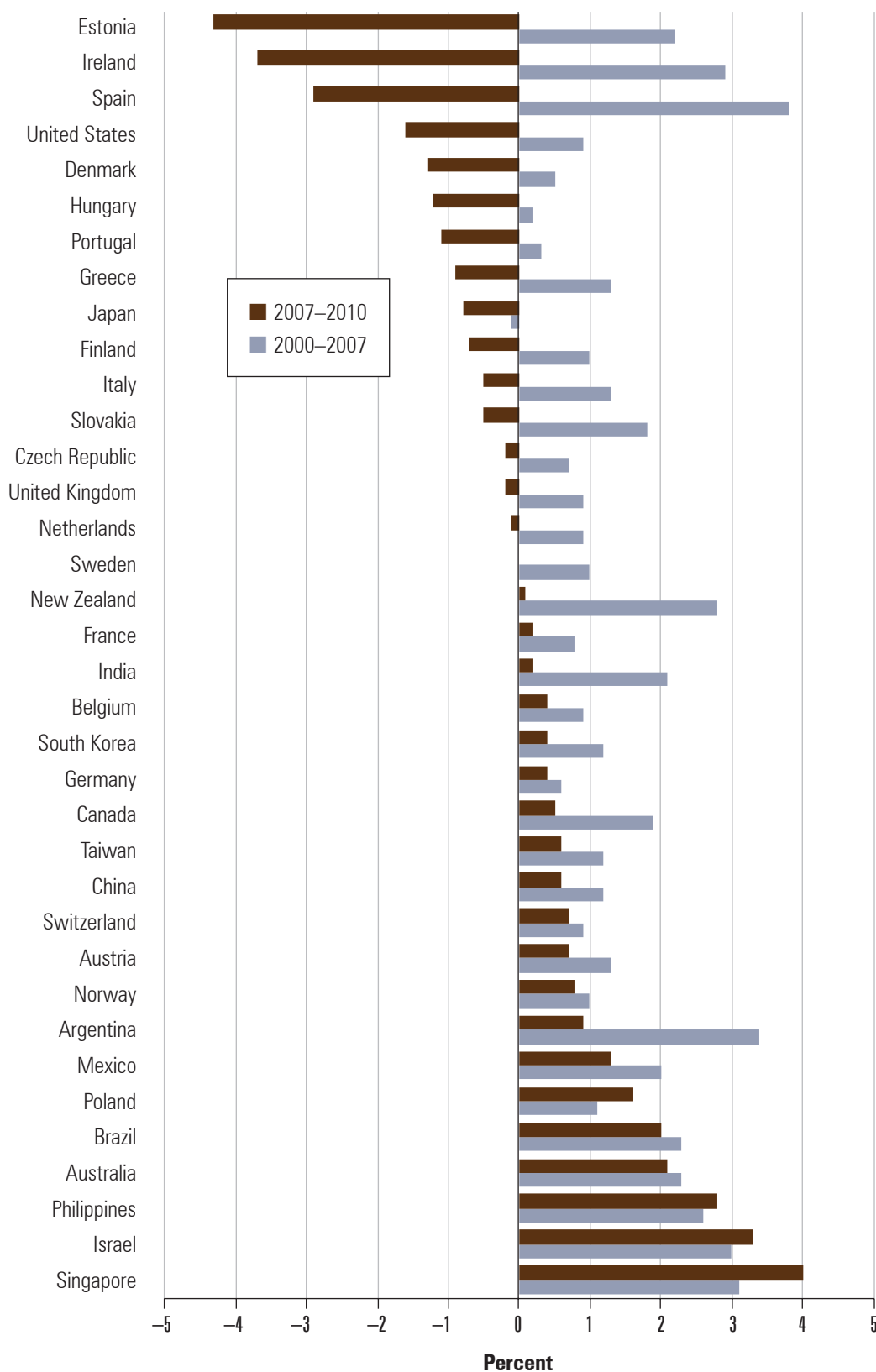
SOURCES: U.S. Bureau of Labor Statistics and International Labour Office.

CHART 2.6

Between 2007 and 2010, the sharpest declines in employment were in Estonia and Ireland, followed by Spain and the United States.

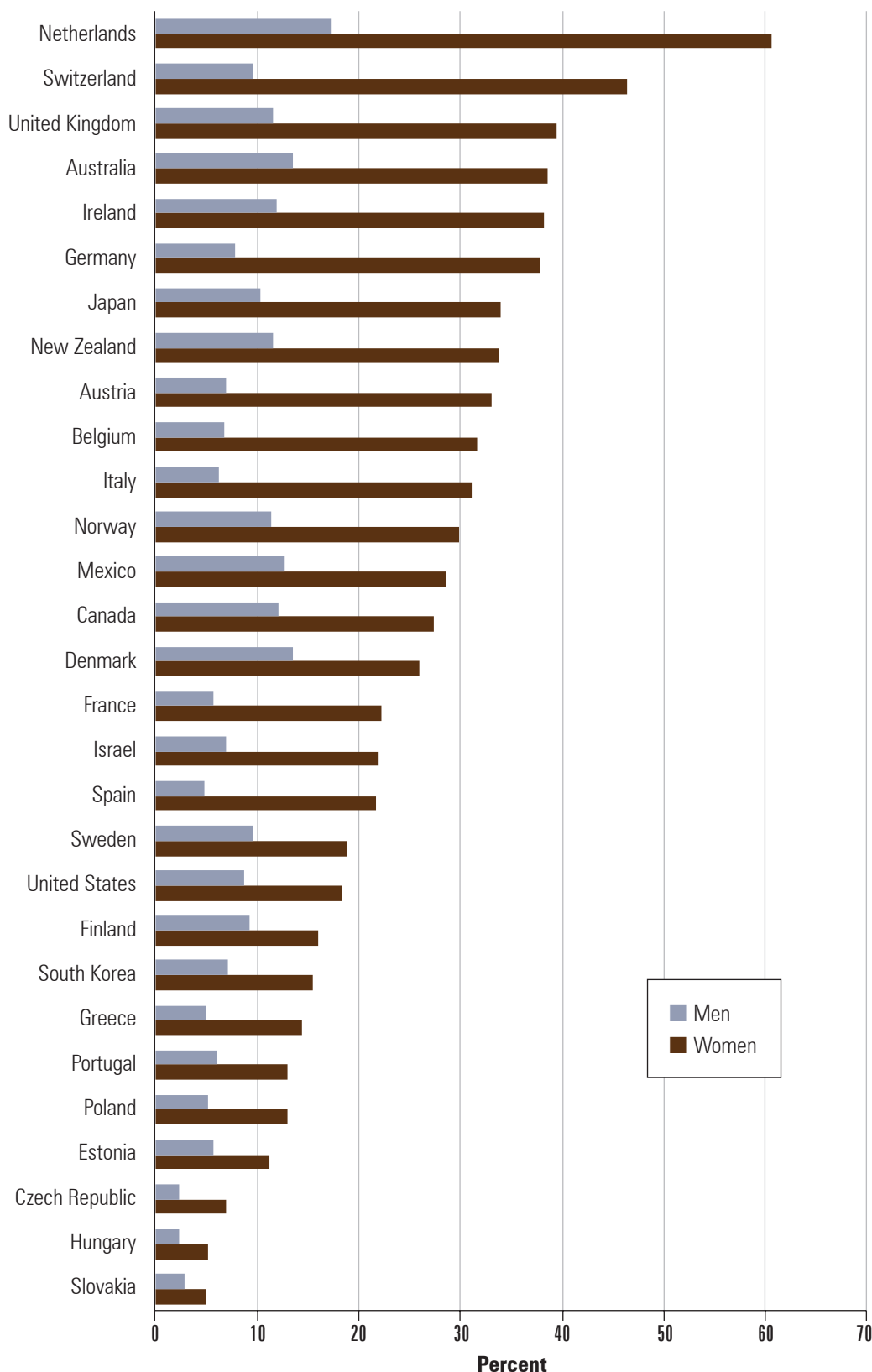
- Employment grew from 2000 to 2007 in all selected countries except Japan, but it decreased in almost half of the selected countries from 2007 to 2010, a period of global recession.
- The largest gains in employment between 2007 and 2010 were in Singapore, Israel, and the Philippines. These countries and Poland were the only countries that had more employment growth between 2007 and 2010 than between 2000 and 2007.

Employment growth, selected countries, average annual rates, 2000–2007 and 2007–2010



SOURCES: U.S. Bureau of Labor Statistics and International Labour Office.

Part-time employment rates by sex, selected countries, 2010



SOURCE: Organisation for Economic Co-operation and Development.

CHART 2.7

Part-time work for men and women was most prevalent in the Netherlands; it was much less common in Eastern European countries.

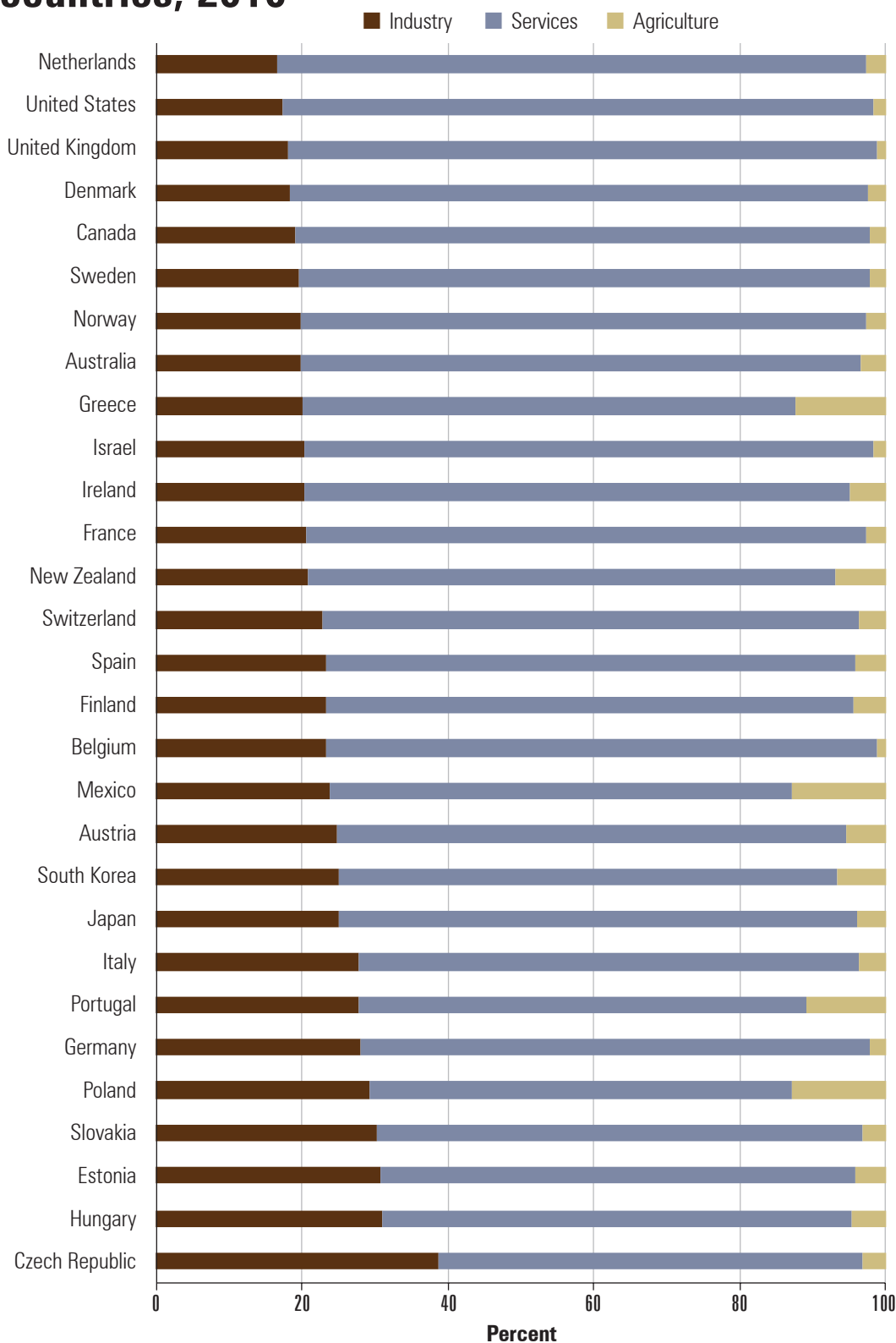
- A larger share of employed women worked part time (fewer than 30 hours per week) than did employed men in all selected countries. The part-time employment rate for women was roughly two to five times higher than the men's rate in all selected countries.

CHART 2.8

More than half of employment was in the service sector in all selected countries.

- The United States, the Netherlands, and the United Kingdom had the largest shares of service employment (more than 80 percent).
- The largest shares of industry employment (near or more than 30 percent) were in five Eastern European countries: the Czech Republic, Hungary, Estonia, Slovakia, and Poland. These countries, plus Portugal and Mexico, also had the lowest shares of employment in services.
- Mexico, Poland, Greece, and Portugal had the largest agricultural sectors.

Share of employment by sector, selected countries, 2010



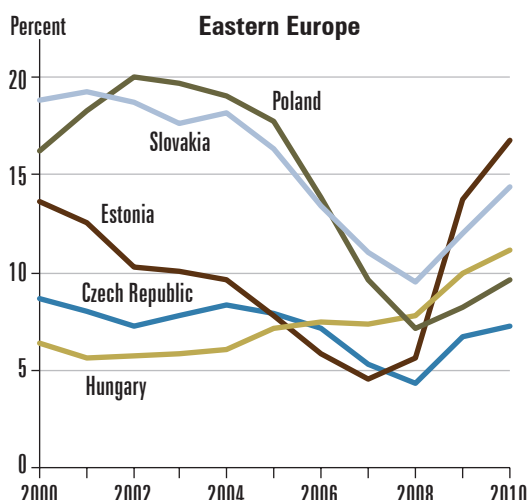
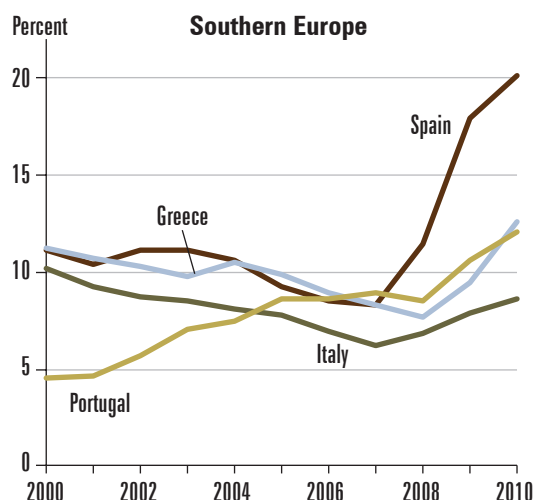
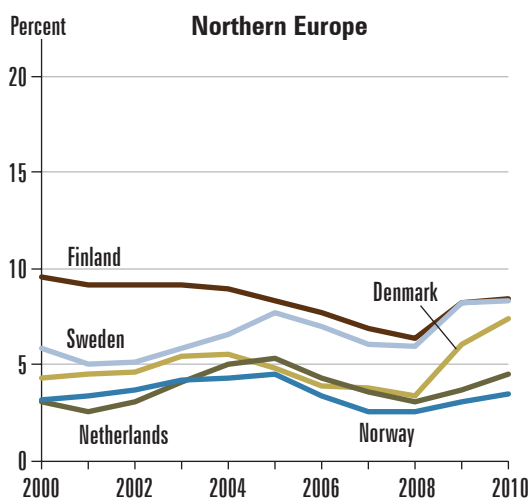
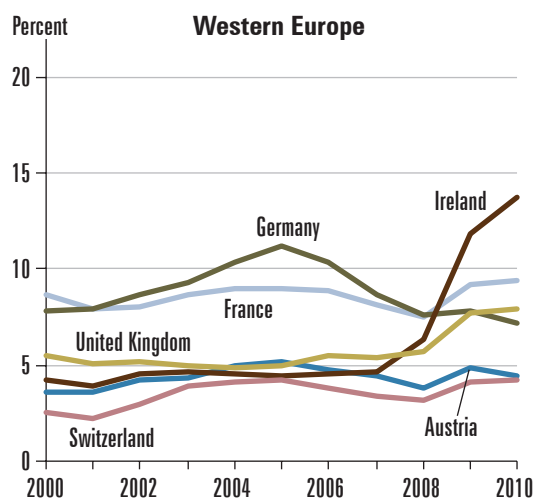
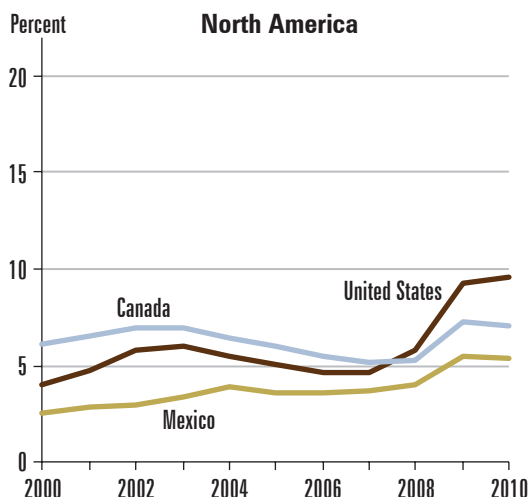
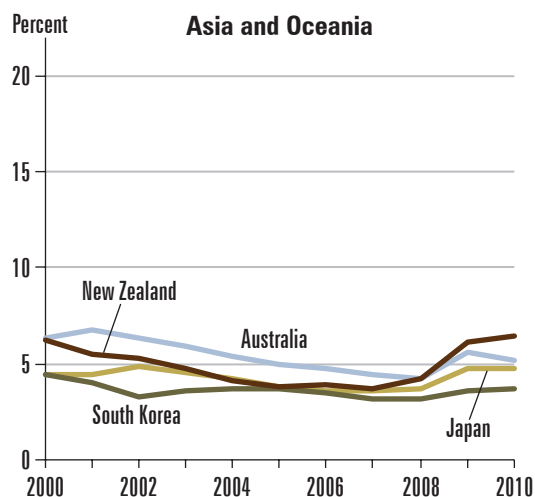
NOTE: 2009 data for the Czech Republic and Switzerland. Agriculture includes hunting, forestry, and fishing. Industry is composed of mining and quarrying, manufacturing, construction, and for some countries, public utilities (electricity, gas, and water). Public utilities represent less than 3 percent of industry in all countries shown.

SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

Unemployment rates, selected countries, 2000–2010

CHART 2.9

In a majority of the selected countries, unemployment rates were higher in 2010 than they were in 2000, in part because of the effects of the global recession at the end of the decade.



SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

- The global recession had the most profound effect on unemployment rates in Southern and Eastern Europe; unemployment rates increased sharply in those countries between 2008 and 2010.

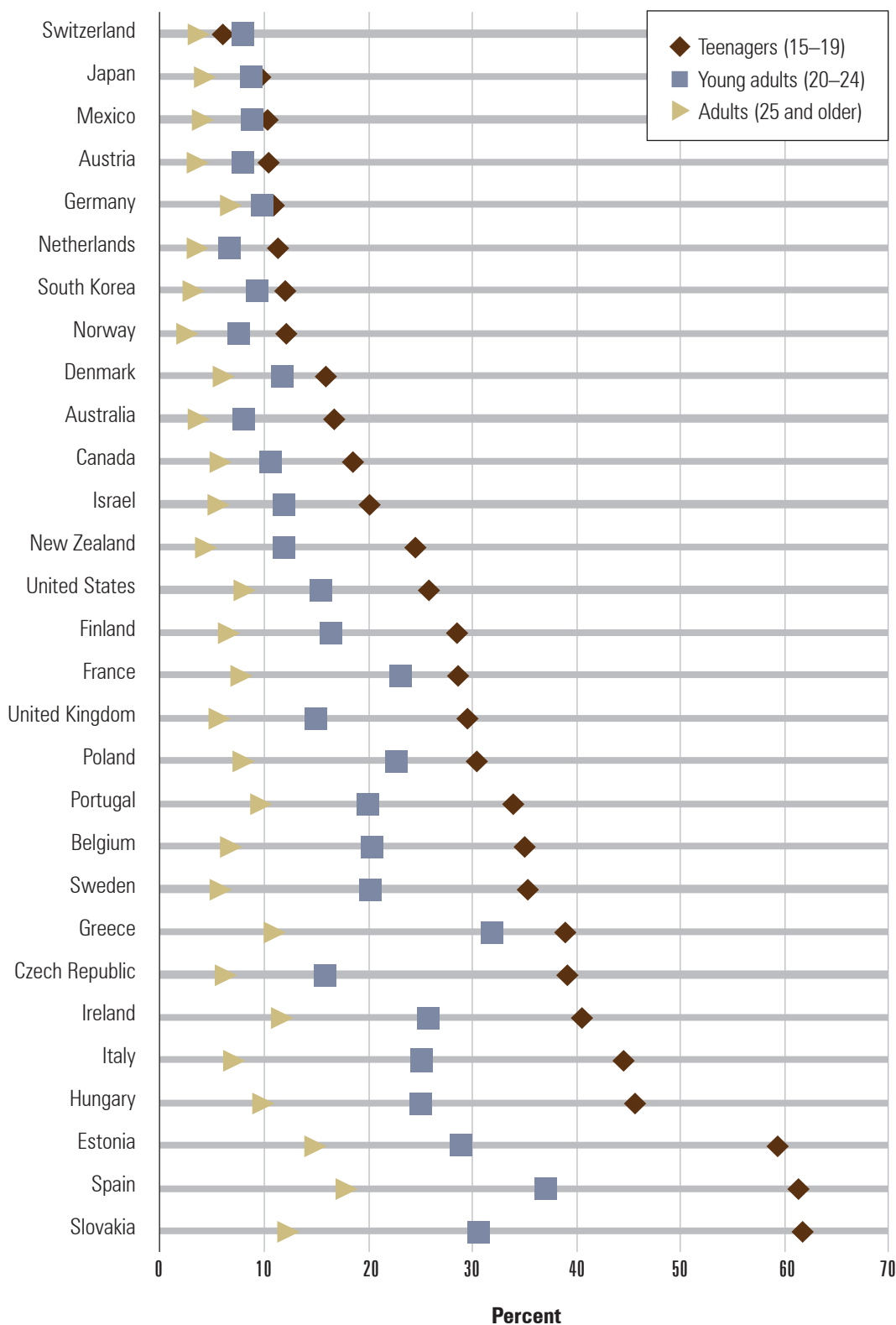
- Ireland and Spain had the largest increases in the unemployment rate between 2000 and 2010.

CHART 2.10

Unemployment rates for youth (teenagers and young adults) are generally higher than those for adults, partly because youth lack skills and work experience. They are therefore more vulnerable to economic downturns.

• Unemployment rates for youth are highest in Eastern and Southern Europe. For countries in these regions, youth unemployment rates topped 30 percent for teenagers, and exceeded 15 percent for young adults.

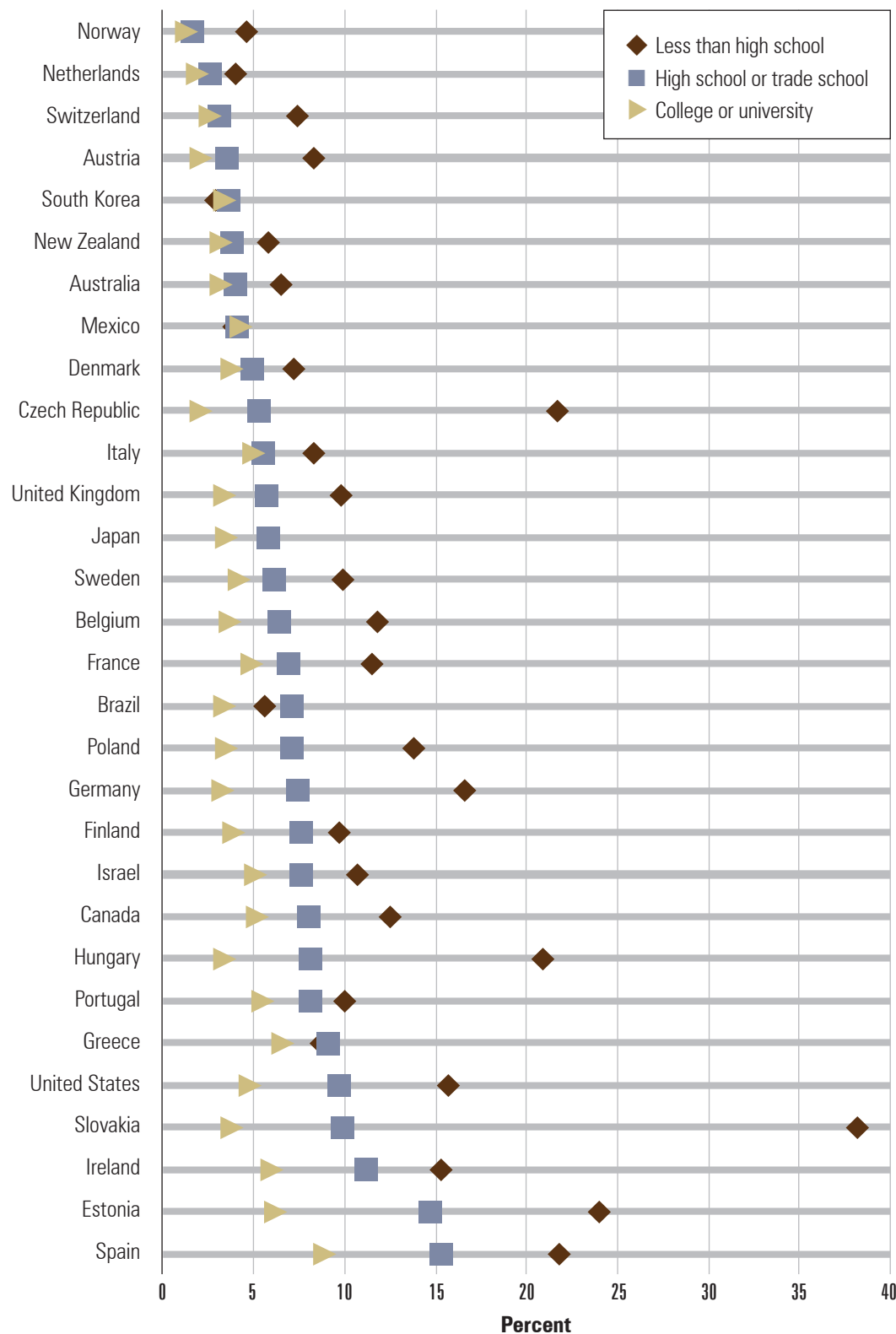
Unemployment rates by age, selected countries, 2010



NOTE: For Canada, France, Norway, Spain, Sweden, the United Kingdom, and the United States, teenagers are ages 16 to 19.

SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

Unemployment rates by education, selected countries, 2009



NOTE: Data refer to persons ages 25 to 64. Data for those who have less than a high school education are not available for Japan.

SOURCE: Organisation for Economic Co-operation and Development.

CHART 2.11

In 26 out of 30 selected countries, college graduates had the lowest unemployment rates, followed by high school graduates; those with less than a high school education had the highest rates.

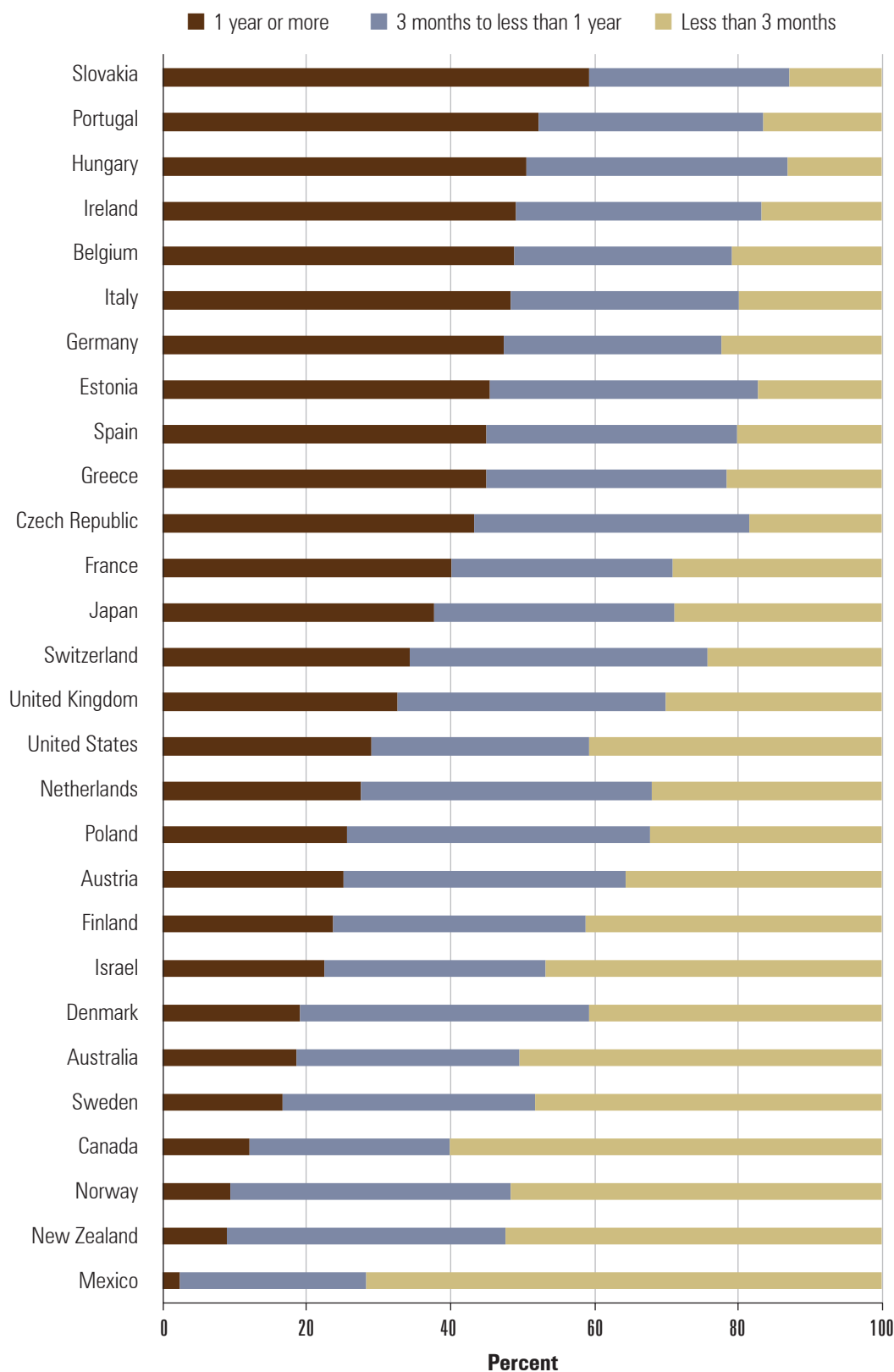
- The unemployment rate gap between persons with less than a high school education and those with a high school diploma was generally larger than the gap between college graduates and high school graduates, reflecting the value of a high school education in seeking employment.

CHART 2.12

Long-term unemployment (1 year or more) made up the largest share of total unemployment in 13 out of 28 selected countries; the 12 countries with the largest shares of long-term unemployment were all in Europe.

- Slovakia had the highest composition of long-term unemployment, with nearly 60 percent of the unemployed out of work for 1 year or more.
- In Mexico, more than two-thirds of the unemployed were out of work for less than 3 months.

Composition of unemployment by duration, selected countries, 2010



SOURCE: Organisation for Economic Co-operation and Development.

Sources

Data for 10 countries for most indicators are based on the BLS report *International Comparisons of Annual Labor Force Statistics, Adjusted to U.S. Concepts, 10 Countries, 1970–2010*. The 10 countries are the United States, Canada, Australia, Japan, France, Germany, Italy, the Netherlands, Sweden, and the United Kingdom. To facilitate international comparisons, BLS adjusts data for these countries to U.S. concepts. For specific adjustments and breaks in series, see the [country notes](#) associated with the BLS report.

Data for the remaining countries and for some indicators in their entirety—labor force participation rates by age (chart 2.3), part-time employment rates (chart 2.7), and unemployment by education (chart 2.11) and by duration (chart 2.12)—are based on data from the International Labour Office (ILO) or the Organisation for Economic Co-operation and Development (OECD).

Country coverage for labor force levels and participation rates, employment-population ratios, and employment growth (charts 2.1–2.6) is supplemented with data from the ILO database [Key Indicators of the Labour Market](#) (KILM). The KILM harmonizes data using econometric models to account for differences in national data and scope of coverage, collection and tabulation methodologies, and other country-specific factors, such as military service requirements. Although some differences remain between the KILM and ILC series, they do not materially affect comparisons across countries.

Country coverage for part-time employment rates, employment by sector, and unemployment data (charts 2.7–2.12) is supplemented with data from the OECD database [OECD.Stat](#). The OECD generally uses labor force surveys and captures labor force statistics according to [ILO guidelines](#), which facilitate cross-country comparisons, because these guidelines create a common conceptual framework for countries. However, except for total unemployment rates (chart 2.9), the OECD does not adjust data for differences that remain across countries in coverage and definitions that can affect international comparisons. See *Labor Force Statistics in OECD Countries: Sources, Coverage and Definitions*. For total unemployment rates, the OECD series used is the “harmonized unemployment rates” (HURs), which are adjusted to conform to the ILO guidelines in countries where deviations occur. For a full discussion of comparability issues, see the BLS article, “[International unemployment rates: how comparable are they?](#)” at www.bls.gov/opub/mlr/2000/06/art1full.pdf.

Using multiple sources for an indicator to extend country coverage can introduce additional comparability issues, because each organization employs different methods for harmonizing data, if adjustments are made at all. Users should use caution when making international comparisons and are encouraged to review the methodological documents associated with each source.

In chart 2.6, the periods 2000–2007 and 2007–2010 are selected to compare a time of global recession (2007–2010) against a prerecessionary time (2000–

2007). The chart shows the average annual growth rate during each period. Although 2007 is included in both, it represents two different annual changes that do not overlap: 2006–2007 in the first period and 2007–2008 in the second period.

Definitions

Labor market data cover only civilians (i.e., members of the Armed Forces are not included). The **labor force participation rate** is the labor force as a percent of the working-age population. The **labor force** is the sum of all persons classified as employed and unemployed. The **working-age population** is either ages 15 and older or ages 16 and older, with the lower age limits varying by country. (See BLS and ILO documents from above sources.)

The **employed** are persons who, during the reference week, did work for at least 1 hour as paid employees; worked in their own business, profession, or on their own farm; or did work as unpaid workers in an enterprise operated by a family member (for at least 1 hour according to the ILO guidelines but for at least 15 hours according to U.S. concepts). Definitions of the employed vary by country. (See BLS, ILO, and OECD documents from above sources.) The **employment-population ratio** is employment as a percentage of the working-age population. **Part-time employment** refers to employed persons who usually work less than 30 hours per week in their main job; in some countries, “actual” rather than “usual” hours are used. The **part-time**

employment rate is the share of total employment that is part time and is also referred to as the incidence of part-time employment.

The **unemployed** are persons without work, who were actively seeking employment and currently available to start work. Definitions of the unemployed vary by country. (See BLS and OECD documents from above sources.) The **unemployment rate** is unemployment as a percentage of the labor force; it is the most widely used measure of an economy’s unused labor supply. For unemployment rates by education (chart 2.11), the levels of educational attainment accord with the 1997 International Standard Classification for Education (ISCED). **Less than high school** corresponds to “less than upper secondary education” and includes ISCED levels 0–2 and 3C. **High school or trade school** corresponds to “upper secondary and post-secondary education” and includes levels 3A, 3B, and 4. **College or university** corresponds to “tertiary non-university and university” and includes levels 5–6. ■

3 SECTION

A detailed technical drawing of a mechanical gear assembly, showing various components like gears, shafts, and housing parts with dimension lines and labels.

Competitiveness in Manufacturing

Three indicators of international competitiveness in the manufactured goods sector are hourly compensation costs, labor productivity, and unit labor costs.

Hourly compensation measures employers' average hourly labor costs in the manufacturing sector.

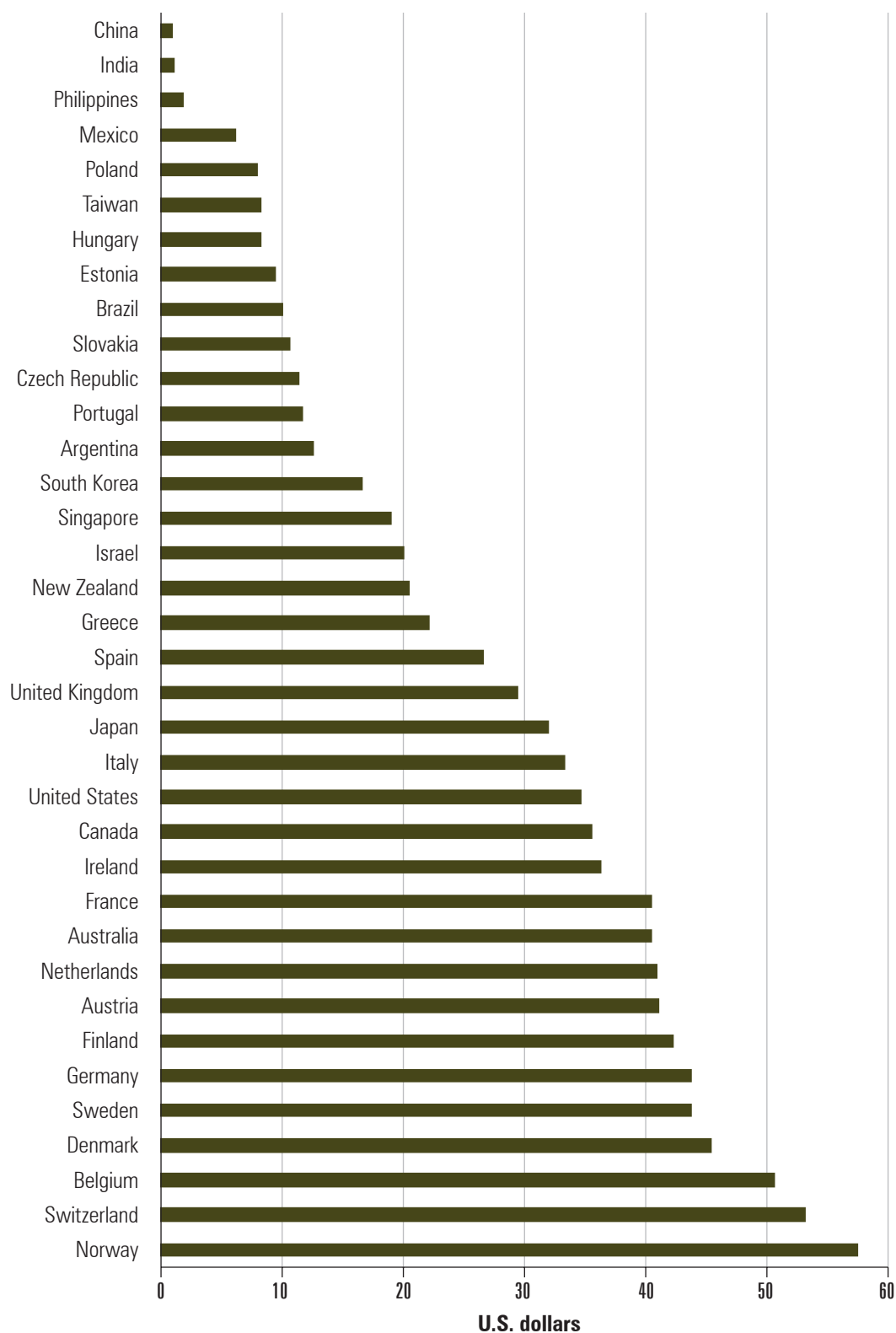
Labor productivity (output per hour worked) measures how effectively hours worked are converted into output. Unit labor costs measure the cost of labor compensation required to produce one unit of output. Increases in labor productivity indicate that a country's workforce is becoming more efficient, and declines in unit labor costs indicate that an economy is becoming more cost competitive.

CHART 3.1

The nine countries with the highest manufacturing hourly compensation costs were all in Europe.

- Compensation costs in Norway were 1.7 times larger than compensation costs in the United States and more than 50 times larger than those in China.
- Compensation costs in China and India have been growing faster than those in the United States in recent years, but were still less than 4 percent of the U.S. level.

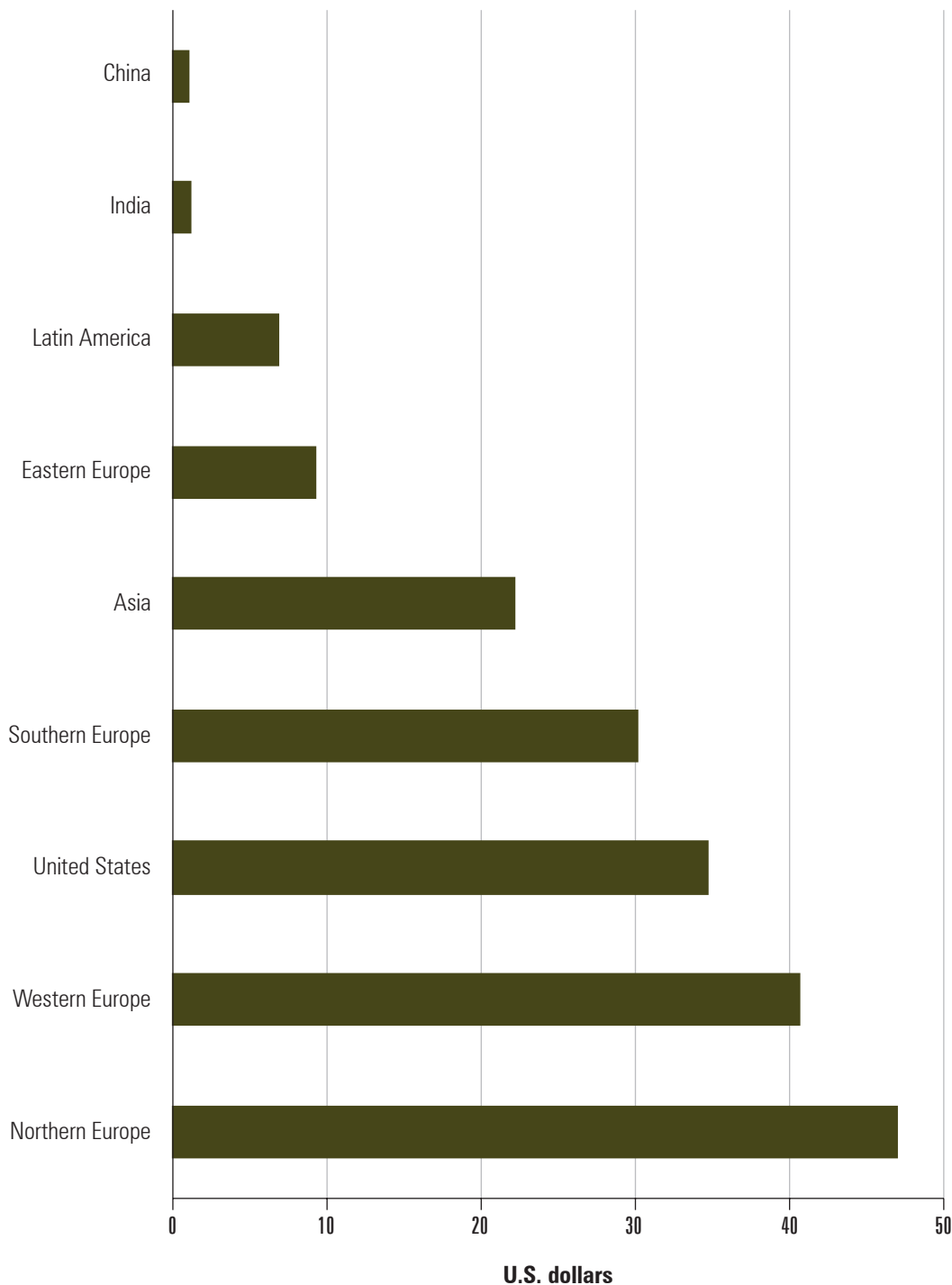
Hourly compensation costs in manufacturing, selected countries, in U.S. dollars, 2010



NOTE: Data for China and India refer to 2007 and are not directly comparable with each other or with data for other countries. See section notes.

SOURCE: U.S. Bureau of Labor Statistics.

Hourly compensation costs in manufacturing, selected countries and regions, in U.S. dollars, 2010



NOTE: Data for China and India refer to 2007 and are not directly comparable with each other or with data for other countries. Latin America refers to Argentina, Brazil, and Mexico; Western Europe to Austria, Belgium, France, Germany, Ireland, the Netherlands, Switzerland, and the United Kingdom; Northern Europe to Denmark, Finland, Norway, and Sweden; Southern Europe to Greece, Italy, Portugal, and Spain; Eastern Europe to the Czech Republic, Estonia, Hungary, Poland, and Slovakia; and Asia to Japan, South Korea, the Philippines, Singapore, and Taiwan. Data are trade weighted averages for the regions; see section notes.

SOURCE: U.S. Bureau of Labor Statistics.

CHART 3.2

Compensation costs in Northern Europe were, on average, \$12 higher than compensation costs in the United States, while those in Latin America were \$28 lower than the U.S. level.

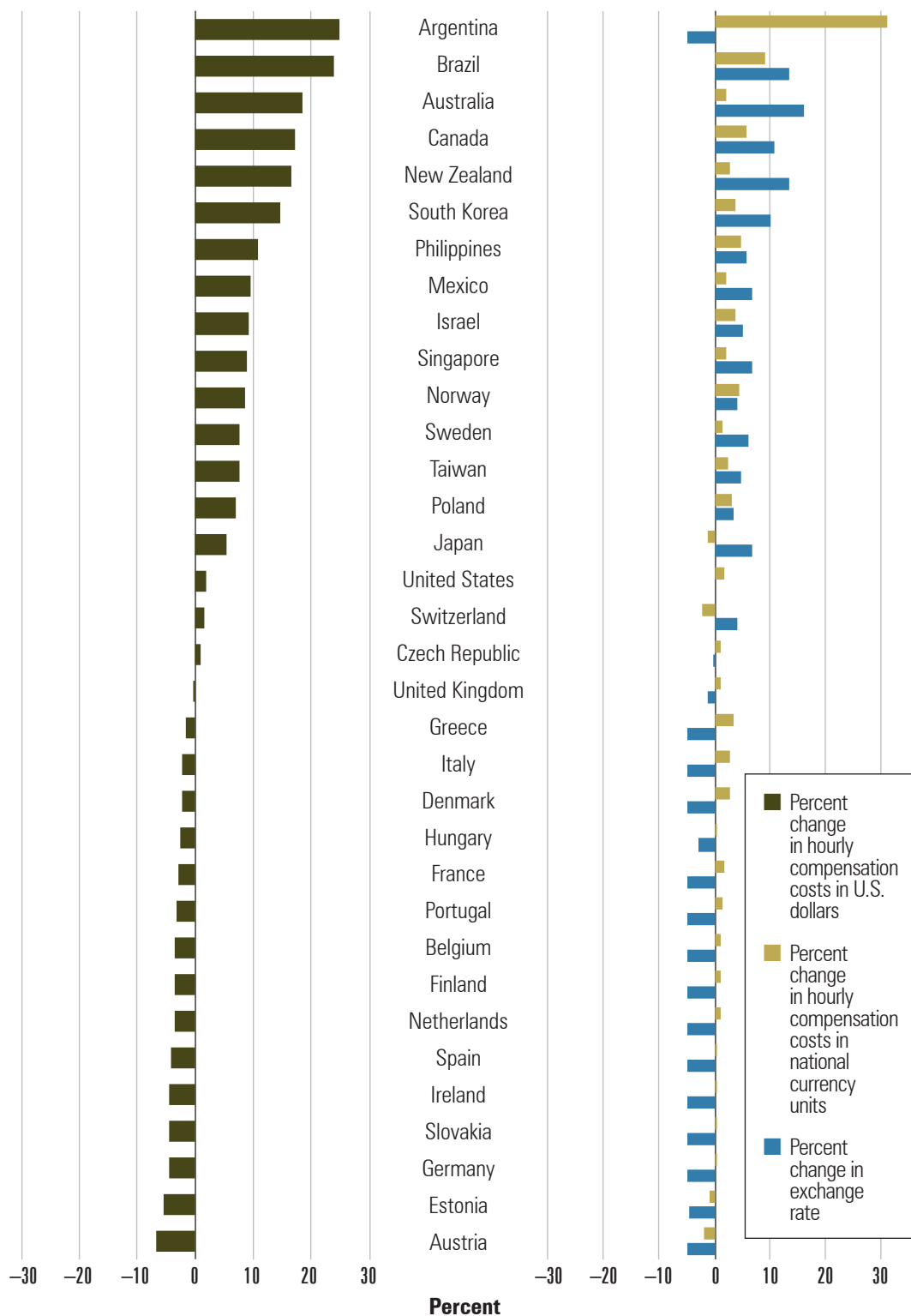
- Eastern European countries, on average, had the lowest hourly compensation costs in Europe, at \$38 below the Northern European level.
- Compensation costs in China were only 5 percent of compensation costs in other Asian countries.

CHART 3.3

From 2009 to 2010, many European currencies lost value against the U.S. dollar, causing widespread declines in dollar-denominated compensation costs in Europe.

- Austria and Estonia experienced currency depreciation along with declining compensation costs in national currency, leading to even larger drops in U.S.-dollar costs.
- U.S.-dollar hourly compensation costs for all selected countries outside Europe increased much faster than those costs in the United States.

Percentage change in hourly compensation costs in manufacturing and exchange rates, selected countries, 2009–2010



NOTE: Changes in compensation costs in U.S. dollars roughly equal the change in compensation costs in national currency plus the change in the value of the currency relative to the U.S. dollar.

SOURCE: U.S. Bureau of Labor Statistics.

Growth in manufacturing hourly compensation costs, selected countries, average annual rates, 2000–2007 and 2007–2010

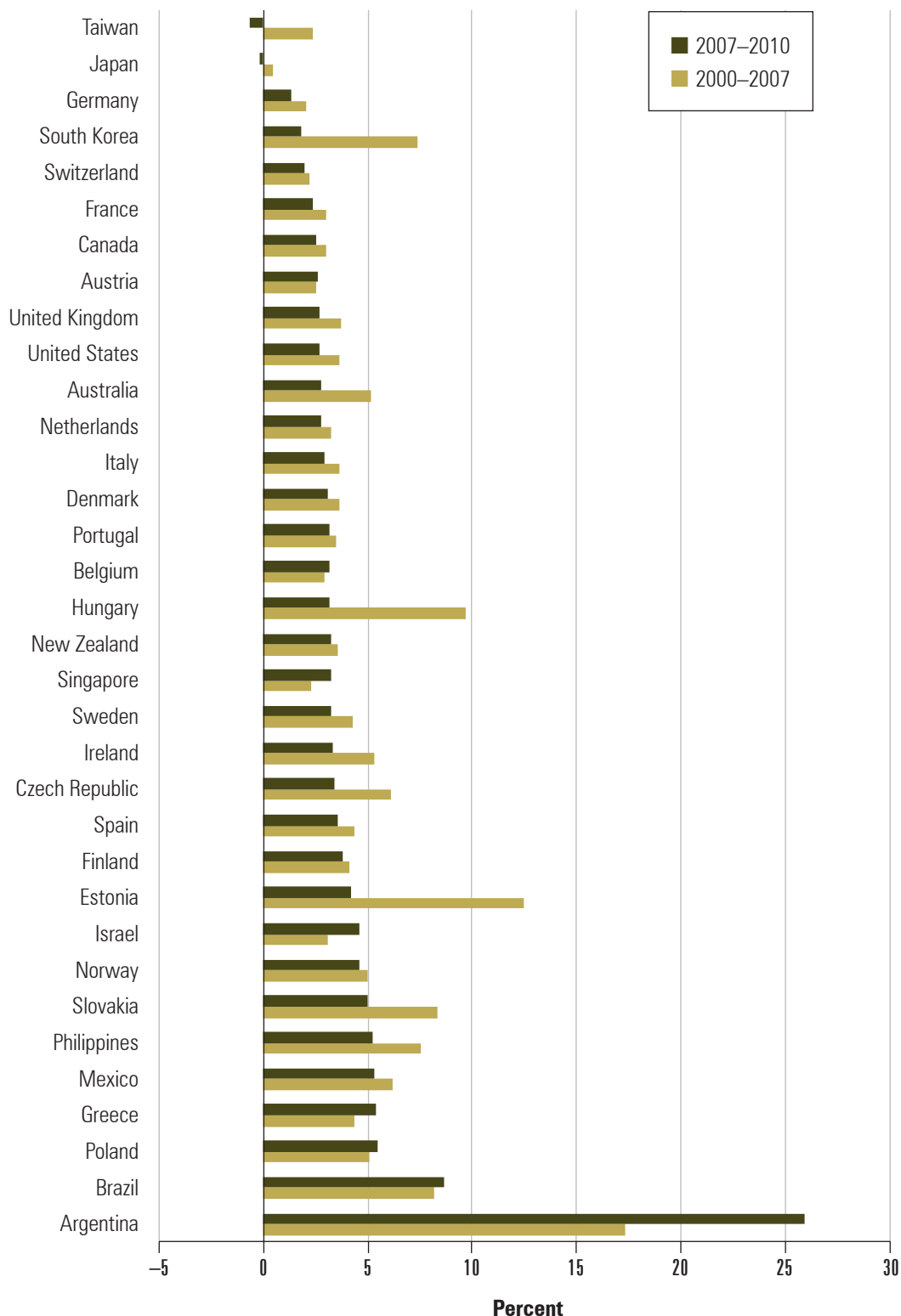


CHART 3.4

Most countries experienced higher growth in compensation costs, on average, over the first 7 years of the last decade than they did over the 2007–2010 period.

- Argentina, Estonia, Hungary, and South Korea had the largest differences in compensation cost growth between the two periods 2000–2007 and 2007–2010.
- In Taiwan and Japan, compensation costs declined during the 2007–2010 period.

NOTE: Growth rates are based on national currency-denominated compensation costs.

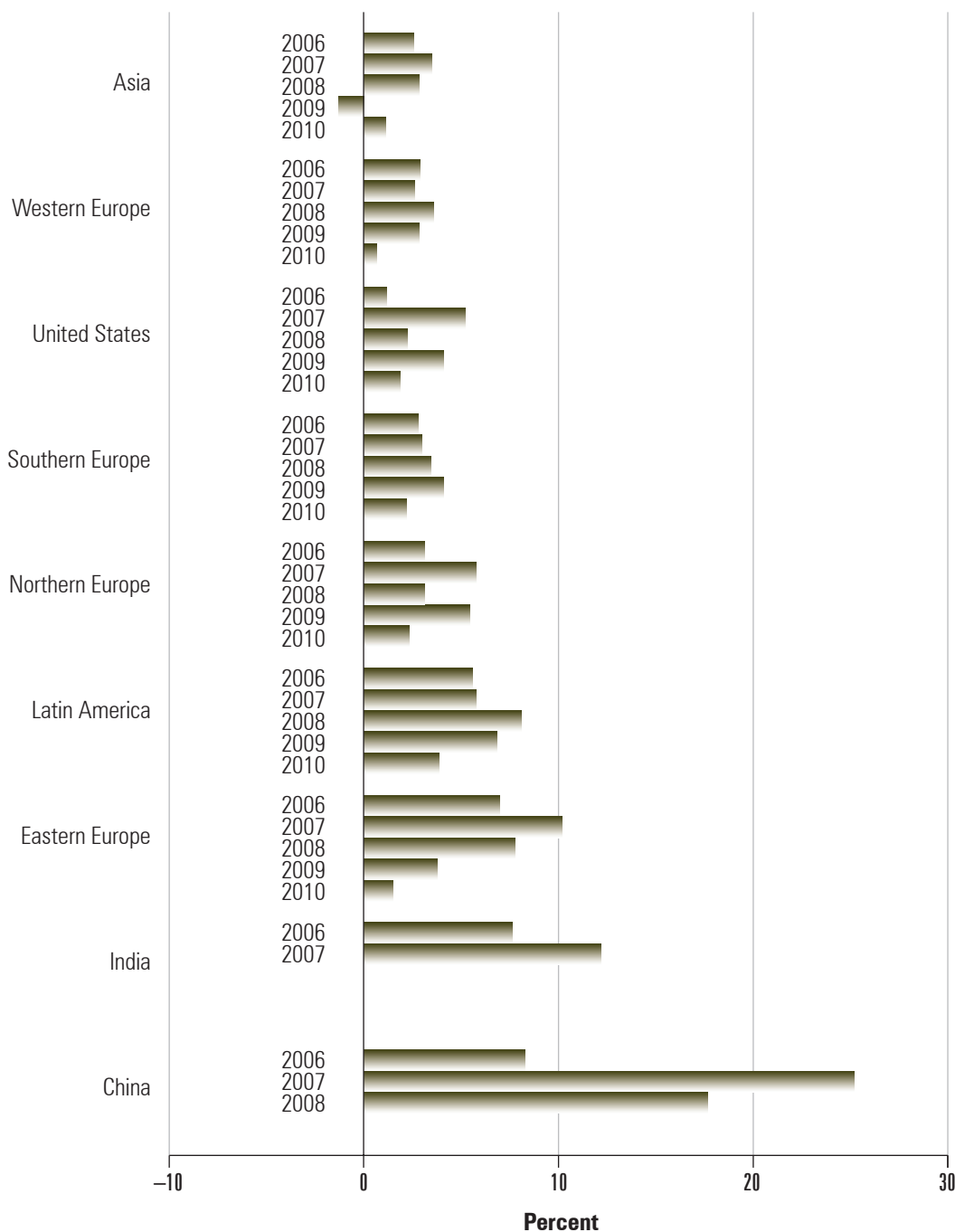
SOURCE: U.S. Bureau of Labor Statistics.

CHART 3.5

Manufacturing compensation costs in China grew the fastest, while those costs in the rest of Asia and Western Europe grew at the slowest pace.

- Eastern Europe and Latin America also experienced rapid increases in compensation, although cost growth in Eastern Europe slowed substantially from 2008 to 2010.
- In 2010, the increase in compensation costs in each region of Europe was the lowest it had been in 5 years.

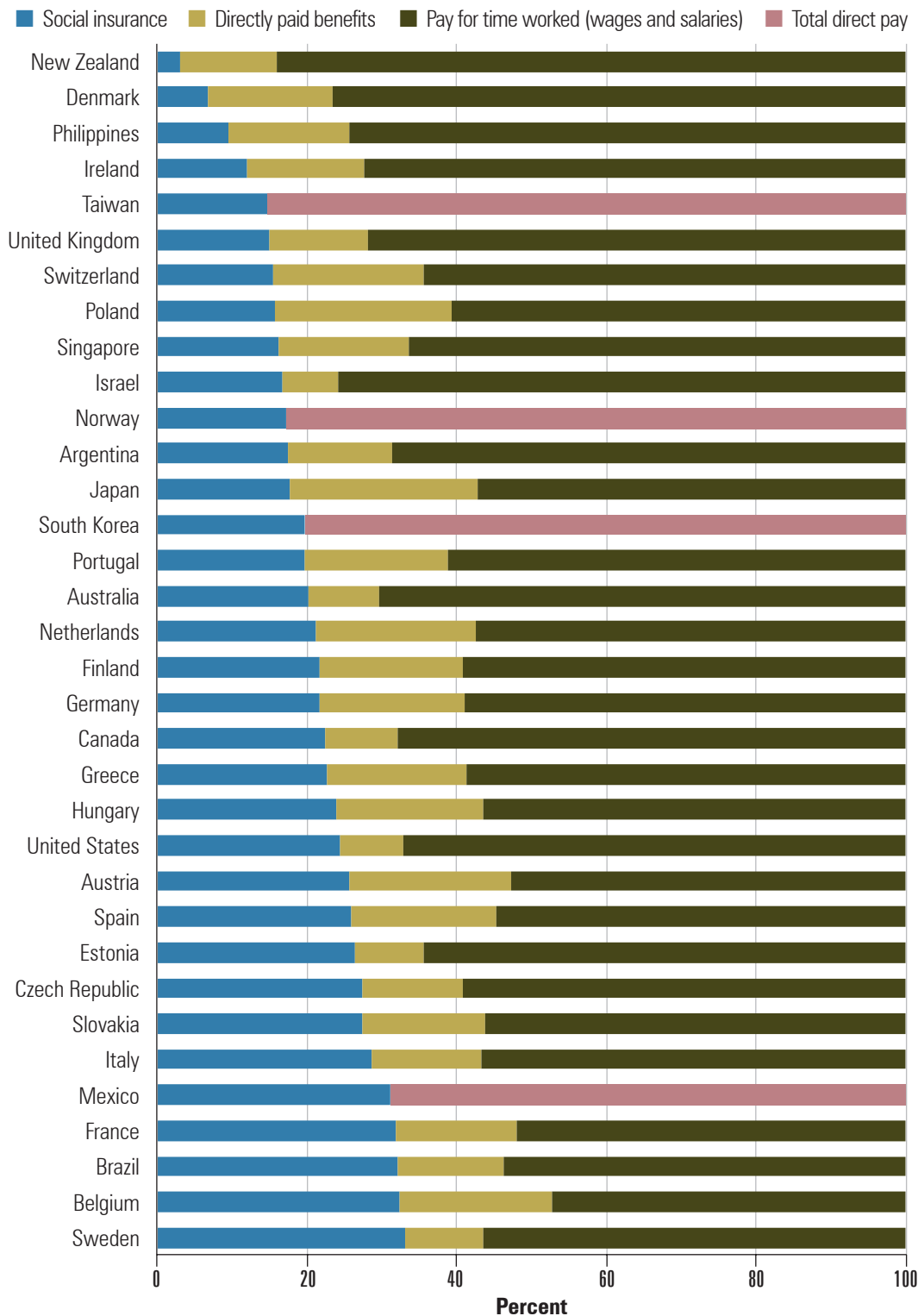
Hourly compensation costs in manufacturing, selected countries and regions, annual percent changes, 2006–2010



NOTE: Annual percent change from previous year. Percent changes are based on national currency-denominated compensation costs. The latest available data for China and India refer to 2008 and 2007, respectively. Latin America refers to Argentina, Brazil, and Mexico; Western Europe to Austria, Belgium, France, Germany, Ireland, the Netherlands, Switzerland, and the United Kingdom; Northern Europe to Denmark, Finland, Norway, and Sweden; Southern Europe to Greece, Italy, Portugal, and Spain; Eastern Europe to the Czech Republic, Estonia, Hungary, Poland, and Slovakia; and Asia to Japan, South Korea, the Philippines, Singapore, and Taiwan. Data are trade weighted averages for the regions; see section notes.

SOURCE: U.S. Bureau of Labor Statistics.

Components of hourly compensation costs in manufacturing, selected countries, in percent, 2010



NOTE: For Mexico, South Korea, Norway, and Taiwan, pay for time worked and directly paid benefits are combined into total direct pay. See section notes.

SOURCE: U.S. Bureau of Labor Statistics.

CHART 3.6

Total benefits (social insurance and directly paid benefits) surpassed 40 percent of compensation costs in 15 out of 34 selected countries.

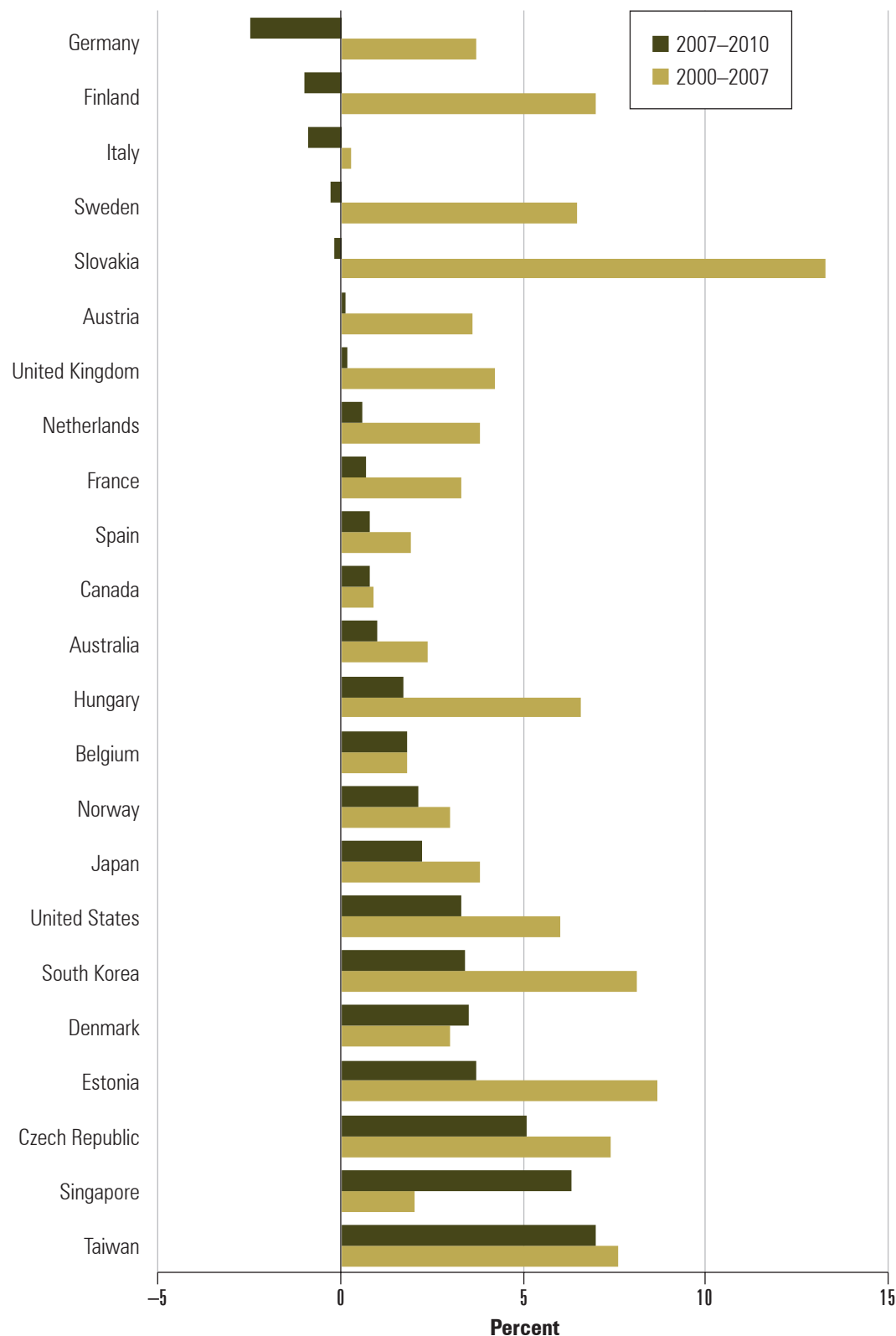
- Total benefits as a percentage of total costs were highest in Belgium, at 53 percent of costs, and lowest in New Zealand, at 16 percent.
- For manufacturers in Sweden, Belgium, Brazil, and France, social insurance costs made up approximately 33 percent of total compensation costs in 2010. Social insurance in New Zealand, however, accounted for only 3 percent of total costs.

CHART 3.7

Manufacturing productivity grew for most countries from 2007 to 2010, but at a much slower rate than during the 2000–2007 period.

- Germany, Finland, Italy, Sweden, and Slovakia experienced productivity declines in manufacturing during the 2007–2010 period.
- Singapore and Denmark were the only countries that had faster productivity growth from 2007 to 2010 than from 2000 to 2007.

Manufacturing productivity growth, selected countries, average annual rates, 2000–2007 and 2007–2010



SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

Manufacturing output growth, selected countries, average annual rates, 2000–2007 and 2007–2010

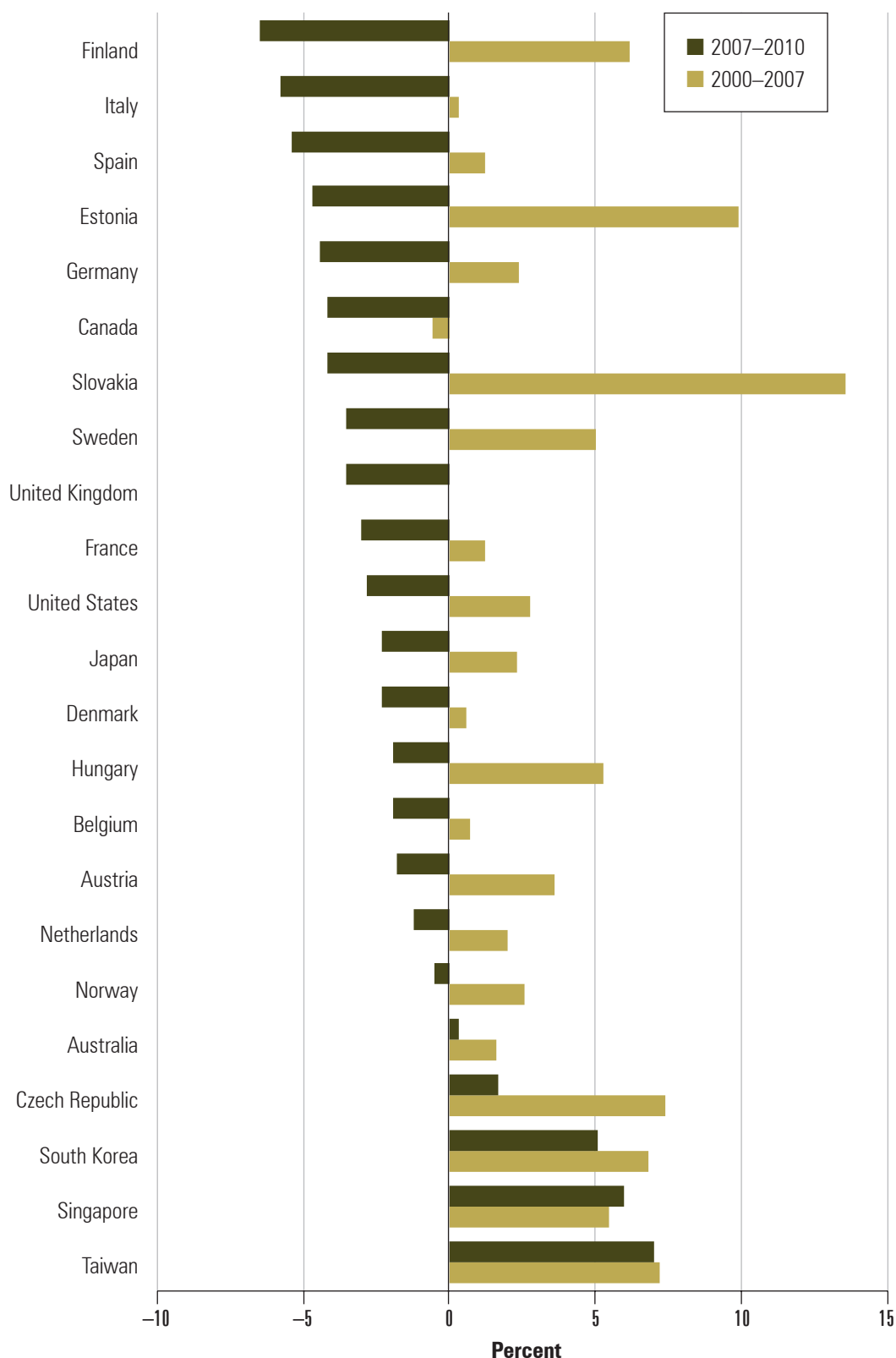


CHART **3.8**

When output grows faster than hours worked, productivity (output per hour) rises.

- Manufacturing output decreased in 18 out of 23 selected countries between 2007 and 2010, causing relatively slow growth in manufacturing labor productivity for most countries during this period.
- In contrast to the 2007 to 2010 period, output increased in 21 out of 23 selected countries from 2000 to 2007.

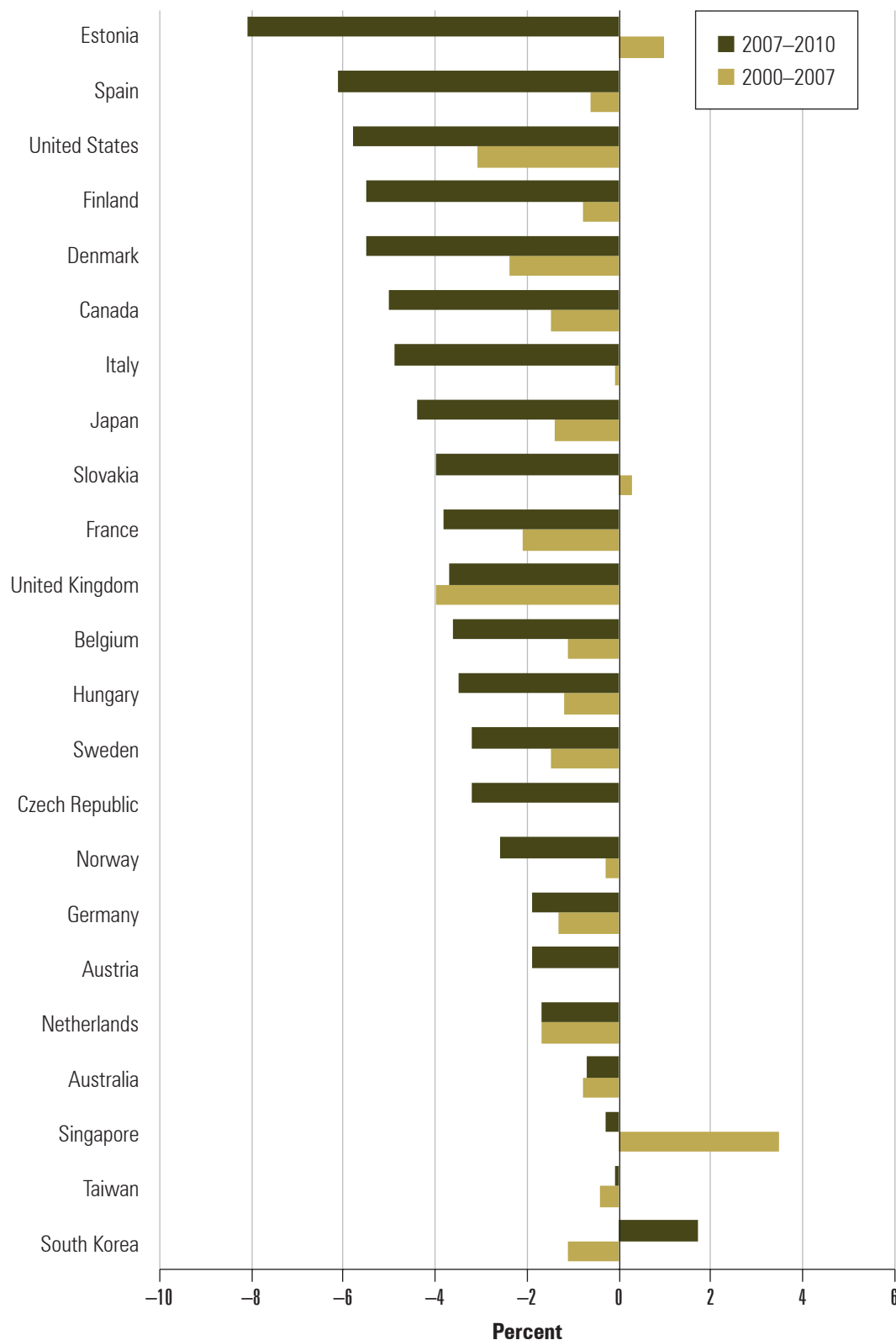
SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

CHART 3.9

Between 2007 and 2010, hours worked in manufacturing declined in all selected countries except South Korea. In several countries, hours fell by more than 5 percent.

- Hours worked also decreased in almost all selected countries from 2000 to 2007, but not to the extent seen during the 2007–2010 period.

Growth in manufacturing hours worked, selected countries, average annual rates, 2000–2007 and 2007–2010



SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

Growth in manufacturing unit labor costs in national currency, selected countries, average annual rates, 2000–2007 and 2007–2010

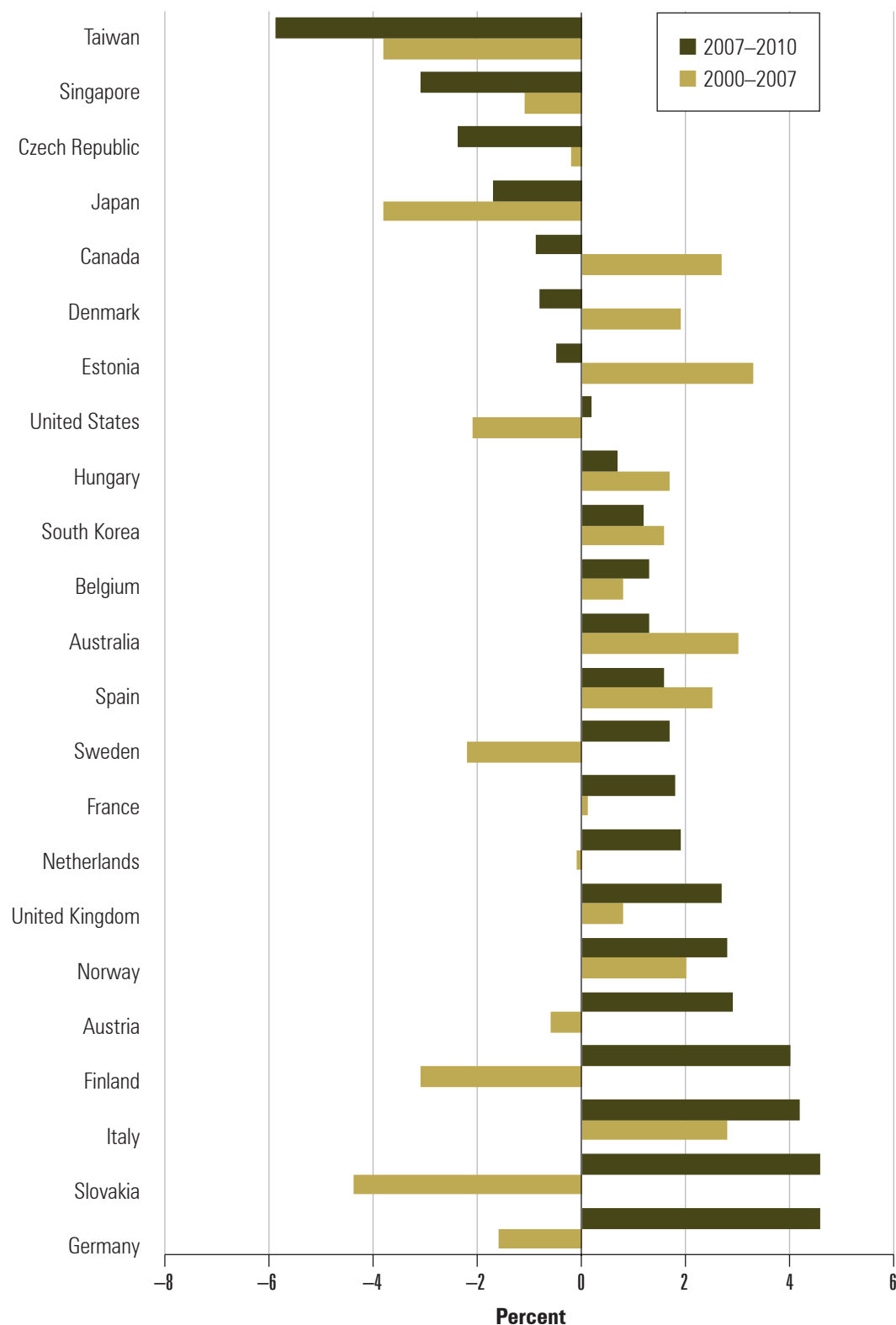


CHART 3.10

Manufacturing unit labor costs (compensation per unit of output) in national currency grew between 2007 and 2010 in 16 out of 23 selected countries. Germany, Slovakia, Italy, and Finland experienced the largest growth.

- Of the countries that experienced increases in unit labor costs from 2000 to 2007, only Canada, Denmark, and Estonia had declines in unit labor costs from 2007 to 2010.

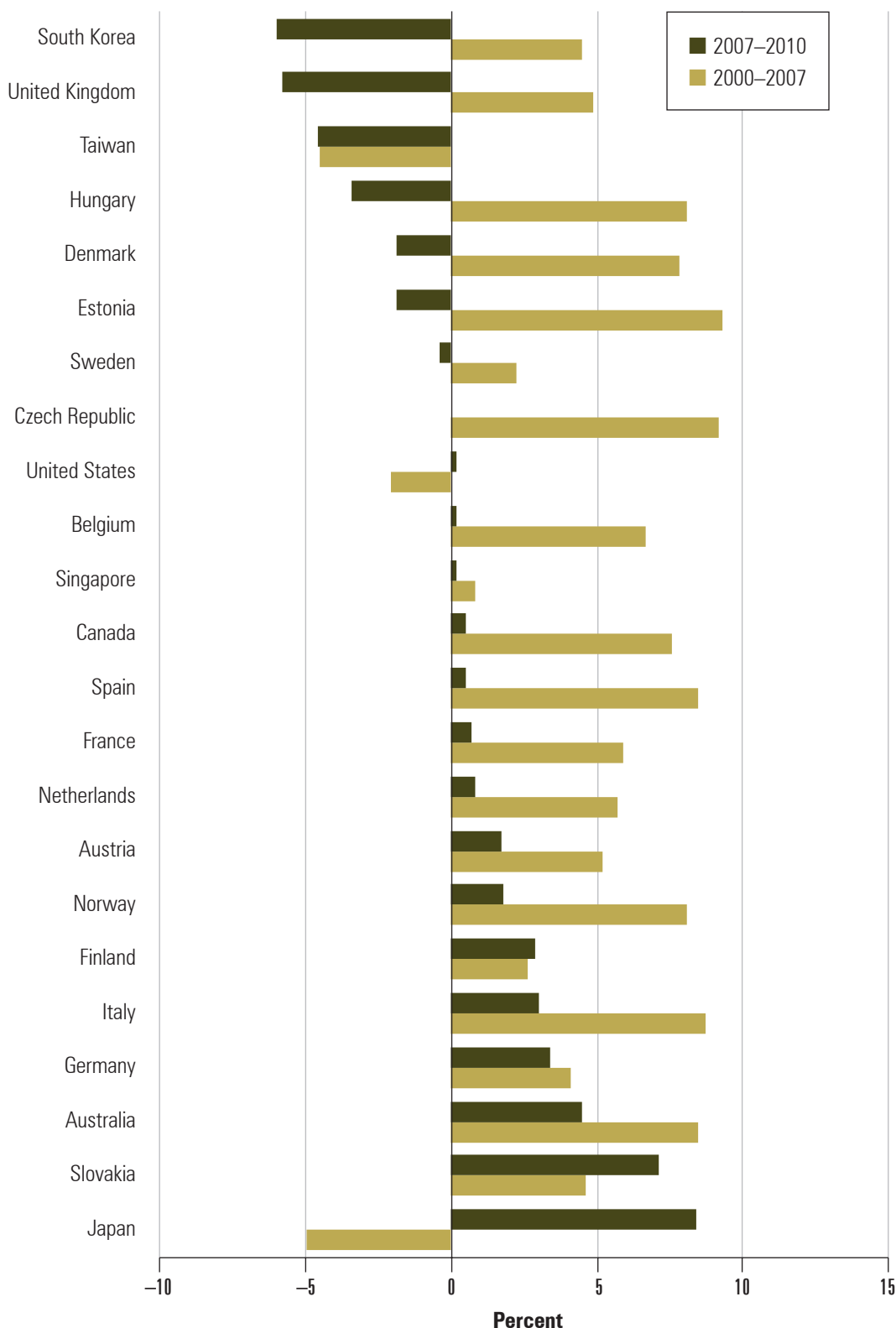
SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

CHART 3.11

Converting unit labor costs (compensation per unit of output) to U.S. dollars enables comparisons of international competitiveness. Competitiveness increases as unit labor costs decrease.

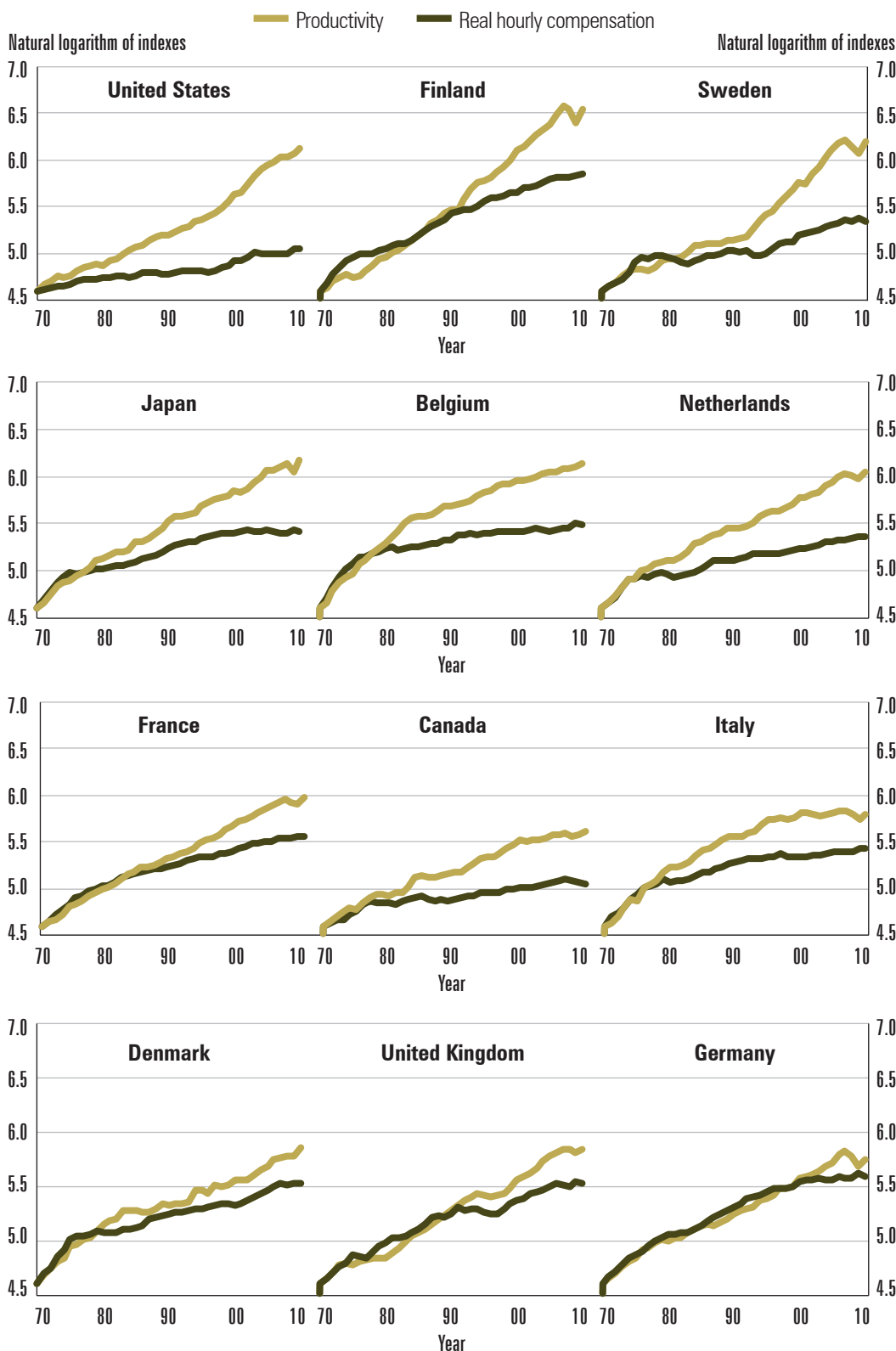
- Growth in manufacturing unit labor costs was faster from 2000 to 2007 than the growth between 2007 and 2010 in most countries. Japan and Slovakia had the sharpest increases in unit labor costs during the latter period.

Growth in manufacturing unit labor costs in U.S. dollars, selected countries, average annual rates, 2000–2007 and 2007–2010



SOURCES: U.S. Bureau of Labor Statistics and Organisation for Economic Co-operation and Development.

Gap between productivity and real hourly compensation in manufacturing, selected countries, 1970–2010



SOURCES: U.S. Bureau of Labor Statistics.

CHART 3.12

In all selected countries, the growth of productivity outpaced the growth of real hourly compensation in manufacturing between 1970 and 2010, creating a compensation-productivity gap.

- By 2010, the gap was largest in the United States, Finland, and Sweden. The gap was smallest in Germany, the United Kingdom, and Denmark.

Sources

Hourly compensation costs (charts 3.1–3.6) measure employers' average hourly labor costs in the manufacturing sector. Average costs refer to all employees, are based on national establishment surveys, and are prepared for level comparisons. To permit meaningful level comparisons of employer labor costs across countries, earnings data from national surveys are adjusted to the BLS concept of hourly compensation. (See definition that follows.) Data for all countries are based on the BLS news release *International Comparisons of Hourly Compensation Costs in Manufacturing, 2010* and the related time series tables. Also, see the technical notes and country notes associated with this release.

Because of various data gaps and methodological issues, compensation costs for China and India are not directly comparable with each other or with data for other countries. For further information, see the Country at a Glance pages for China and India at www.bls.gov/ilc/country.htm.

Average compensation costs for selected regions (charts 3.2 and 3.5) are calculated by weighting each country's compensation cost value by its relative importance to U.S. trade. The weights are calculated using the dollar value of U.S. trade (exports plus imports) in manufactured commodities with each country in 2010.

Data on productivity, output, hours, unit labor costs, and real hourly compensation (charts 3.7–3.12) refer to all employed persons (employees and the self-employed) in the manufacturing sector. These data

are based on national accounts and are prepared for trend (rather than level) comparisons. Data for most countries are based on the BLS news release *International Comparisons of Manufacturing Productivity and Unit Labor Cost Trends* and the related time series tables. See the technical notes associated with the news release.

Data for the remaining countries are based on data from the Organisation for Economic Co-operation and Development (OECD) database OECD.Stat.

In charts 3.4 and 3.7–3.11, the periods 2000–2007 and 2007–2010 are selected to compare a time of global recession (2007–2010) against a prerecessionary time (2000–2007). The charts show the average annual growth rate during each period. Although 2007 is included in both, it represents two different annual changes that do not overlap: 2006–2007 in the first period and 2007–2008 in the second period.

Definitions

Hourly compensation (labor cost) is the average cost to employers of using one hour of employee labor in the manufacturing sector. Compensation includes (1) pay for time worked, (2) directly paid benefits, and (3)

employer social insurance expenditures and labor-related taxes. **Pay for time worked** refers to wages and salaries for time actually worked, including basic wages, overtime pay, shift and holiday premiums, and regular bonuses. **Directly paid benefits** primarily include pay for vacations and other leave, irregular bonuses, and pay in kind. **Social insurance expenditures** are employer contributions to social benefit funds on behalf of workers, such as for unemployment insurance, workers' compensation, health insurance, and pension funds. **Labor-related taxes** are taxes on payrolls or employment, net of subsidies. **Total hourly direct pay** includes all payments made directly to the worker consisting of pay for time worked and directly paid benefits.

Productivity is real output per hour worked. **Output** is the market value in constant dollars of goods and services produced in a country. For international comparisons, output refers to gross output minus

intermediate inputs, or real value added. **Hours** refer to the hours worked by all persons engaged in the manufacturing process. **Unit labor costs** are nominal compensation costs divided by real value-added output. Unit labor costs can be expressed in national currency and in U.S. dollars. **Real hourly compensation** refers to the hourly labor cost for employed persons (employees and the self-employed), adjusted for inflation. It includes all payments made in cash or in kind directly to employees and employer social insurance expenditures. It includes labor-related taxes and excludes labor-related subsidies. ■



4 SECTION



Consumer Prices

Consumer price indexes (CPI) and harmonized indexes of consumer prices (HICP) measure the change over time in the prices paid by consumers for a fixed selection, or market basket, of goods and services. Price indexes are used primarily to adjust income payments for changes in the cost of living and to compute inflation-adjusted measures of other economic series.

Measures of consumer price inflation, selected countries, average annual growth rates, 2007–2010

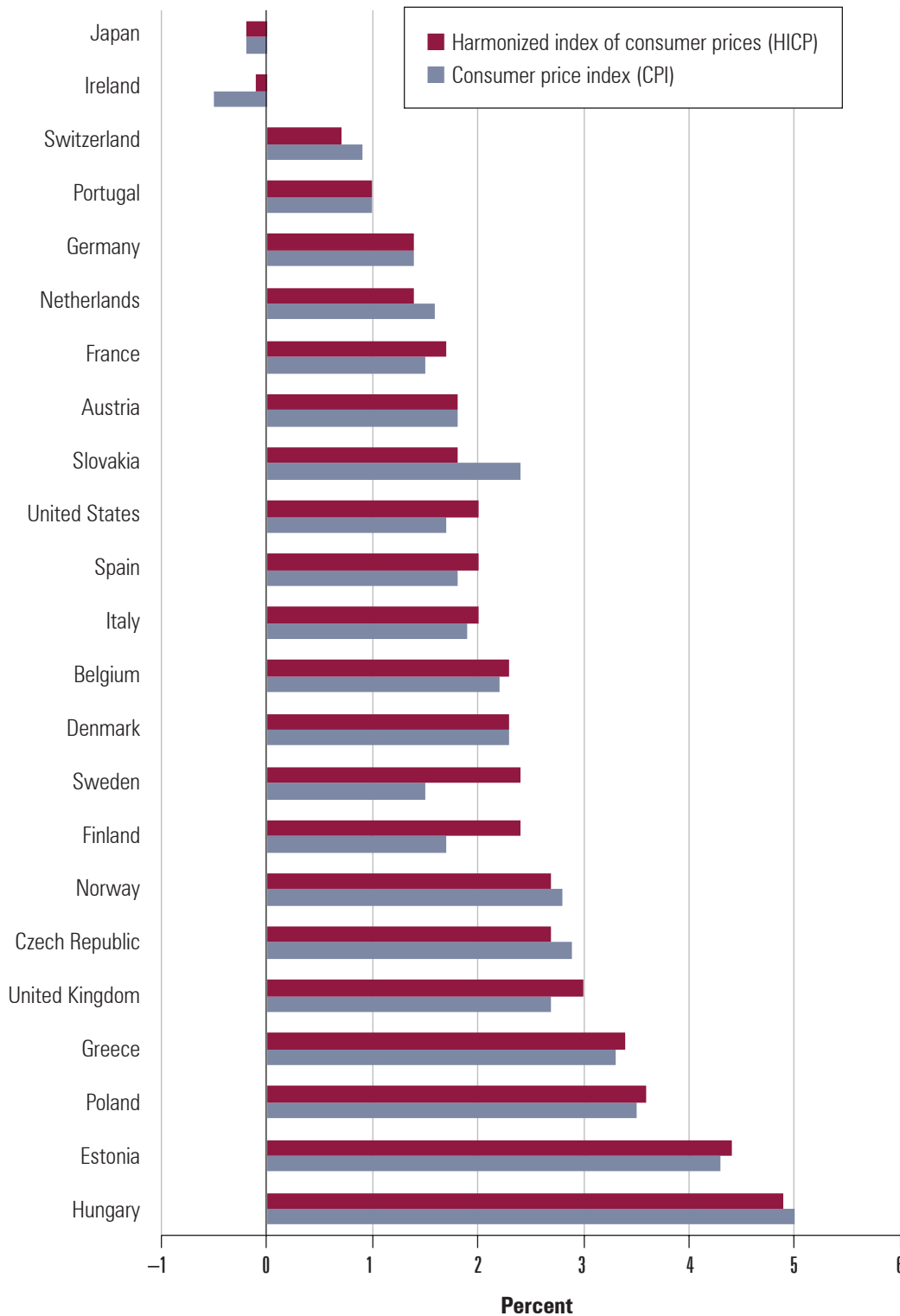


CHART 4.1

The two inflation rates were identical in 5 countries, and the difference between the two rates was greater than half a percentage point in just 3 out of 23 selected countries.

- The greatest differences between the two inflation rates were in Sweden and Finland. The differing trends reflect differences in the way owner-occupied housing is treated by the HICP and CPI for these countries.

NOTE: HICP and CPI are two measures of consumer price changes. HICP are adjusted for comparability across countries, whereas CPI are not adjusted.

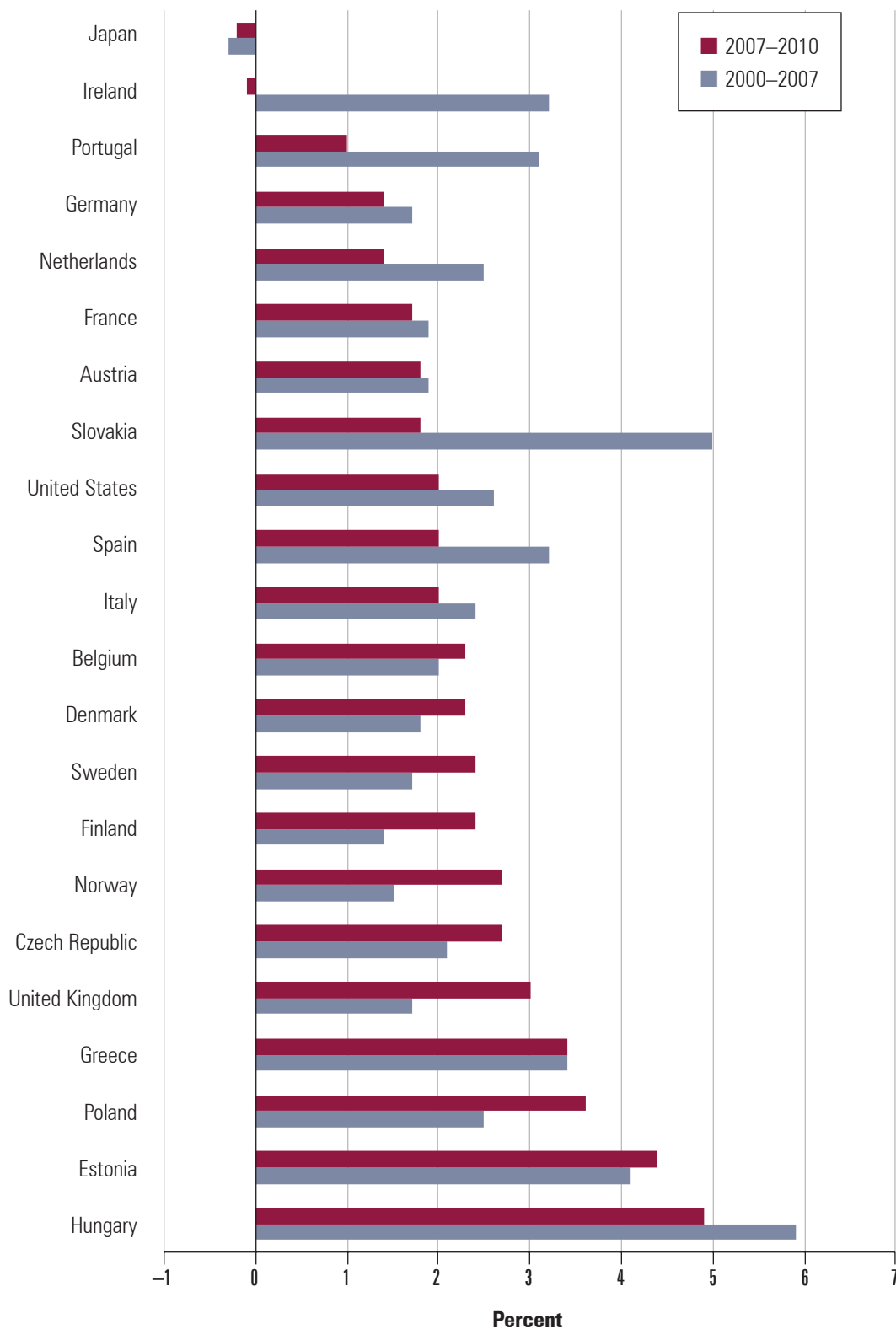
SOURCES: U.S. Bureau of Labor Statistics, Eurostat, and Organisation for Economic Co-operation and Development.

CHART 4.2

Harmonized indexes of consumer prices (HICP) are an internationally comparable measure of consumer price inflation.

- For half the countries shown—particularly Ireland, Slovakia, and Portugal—inflation was slower during the 2007 to 2010 period, when economies worldwide experienced recessionary pressures.
- Eastern European countries generally had the highest rates of inflation during both periods, while prices decreased slightly in Japan.

Harmonized indexes of consumer prices, selected countries, average annual growth rates, 2000–2007 and 2007–2010



SOURCES: U.S. Bureau of Labor Statistics and Eurostat.

Gap between manufacturing compensation and consumer price indexes, selected countries, average annual growth rates, 2007–2010

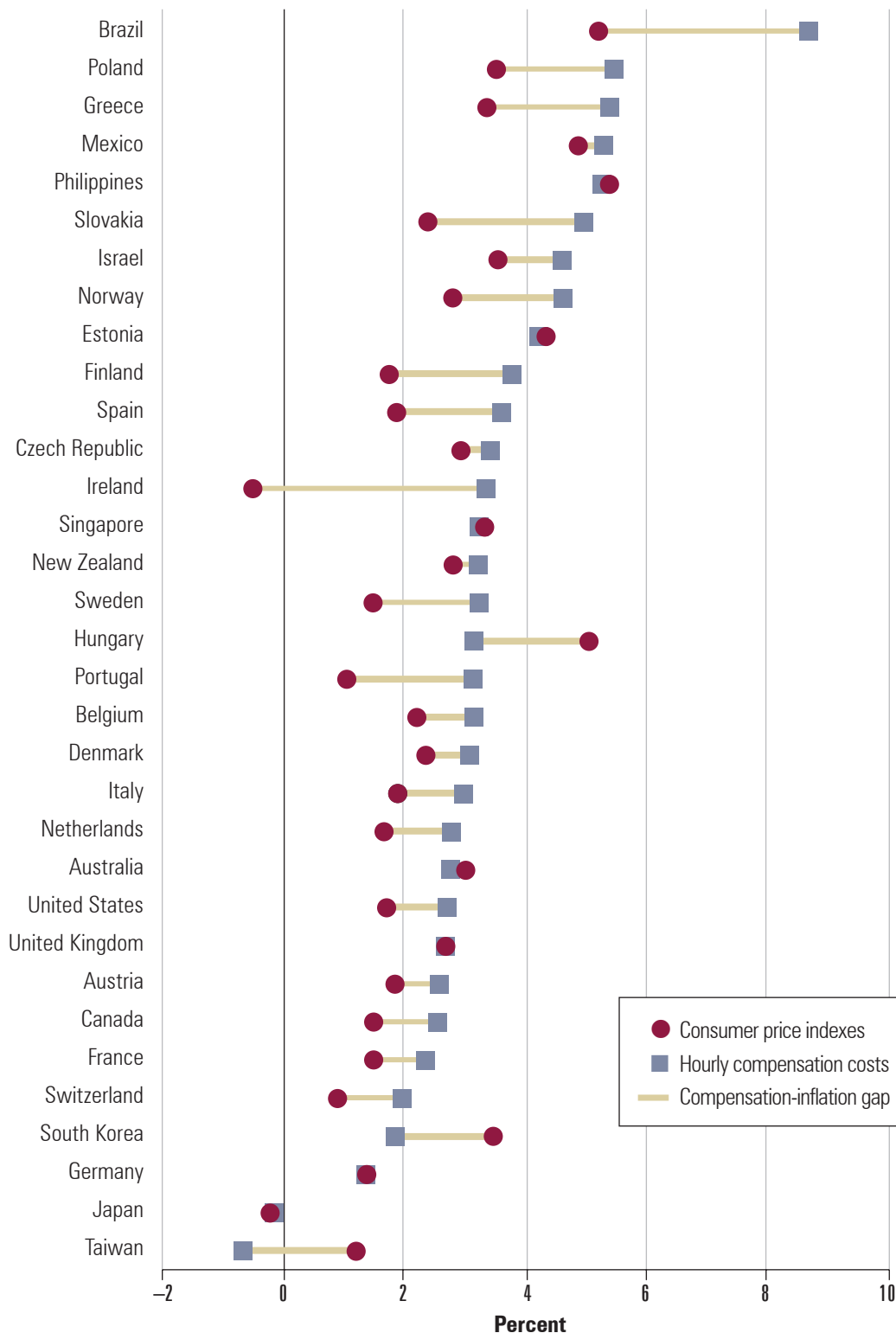


CHART 4.3

The gap between the growth rates for hourly compensation costs and the consumer price indexes (CPI) indicates the degree to which manufacturing worker compensation has kept up with inflation.

- Compensation growth outpaced inflation in most countries between 2007 and 2010. The compensation-inflation gap was largest in Ireland, Brazil, and Slovakia.
- Compensation growth rates lagged inflation most notably in Hungary, Taiwan, and South Korea.

NOTE: Hourly compensation growth rates are based on national currency-denominated costs.

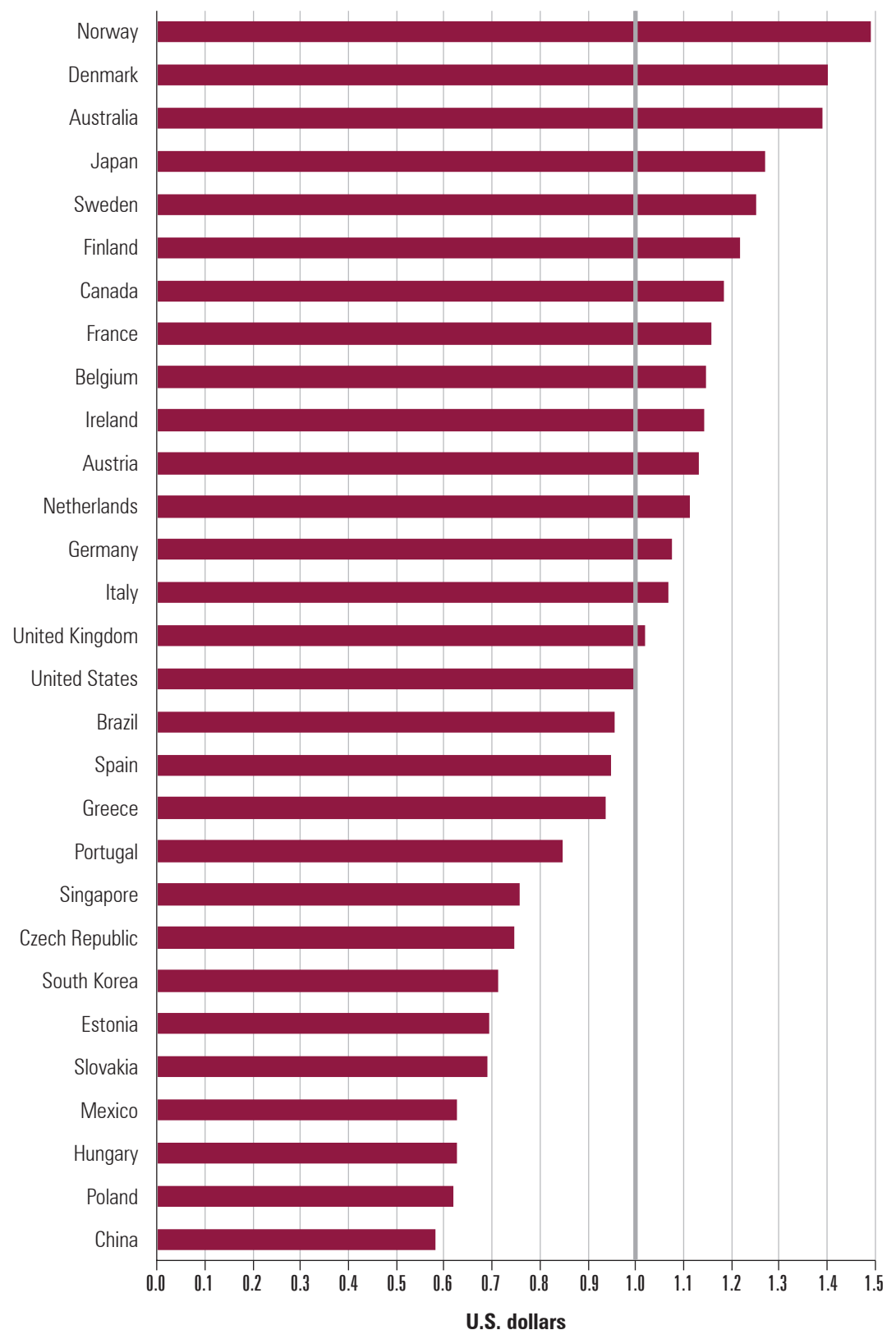
SOURCES: U.S. Bureau of Labor Statistics, Organisation for Economic Co-operation and Development, and the national statistical offices of the Philippines, Singapore, and Taiwan.

CHART 4.4

Low prices relative to the United States were found in Southern and Eastern Europe, Latin America, and East Asia. The cheapest basket of goods was in China.

- The price of foreign goods and services compared with their price in the United States is known as the relative price. Values less (higher) than 1 indicate that prices in that country are relatively low (high), compared with the United States.
- Countries with high relative prices included those in Northern Europe and Western Europe, as well as Australia, Japan, and Canada.

Price of a basket of goods that costs one dollar in the United States, selected countries, 2010



SOURCES: International Monetary Fund, U.S. Federal Reserve, Organisation for Economic Co-operation and Development, and The World Bank.

Sources

Consumer price indexes (CPI) and harmonized indexes of consumer prices (HICP) for most countries are from the BLS report *International Indexes of Consumer Prices, 18 countries and areas*. Data for the remaining countries are based on data from the Organisation for Economic Co-operation and Development (OECD) database [OECD.Stat](#), the European Commission database [Eurostat](#), and national statistical offices (for the Philippines, Singapore, and Taiwan).

Each country produces its own consumer price index using unique methods and concepts. For this reason, CPI data are not fully comparable across countries. Differences exist mainly in population coverage, frequency of market basket weight changes, and treatment of homeowner costs.

The HICP is an internationally comparable measure of consumer price inflation. The HICP is the standard price index that European Union member states

must produce for comparisons across countries. HICP data for the United States are experimental. Although the HICP series for the United States broadly follows the European Union definitions, some differences remain in the frequency of market basket weight changes, aggregation methods, and quality adjustments.

Relative prices are based on PPP from [OECD.Stat](#) and the World Bank database [World Development Indicators](#), and on market exchange rates from the U.S. Federal Reserve, the International Monetary Fund's *International Financial Statistics* publication, and [OECD.Stat](#).

The relationship between purchasing power parities (PPP) and market exchange rates can be used to estimate comparative, or relative, prices of goods and services in different countries. (See chart



4.4.) Relative prices are calculated by dividing PPP by market exchange rates. The resulting values indicate the domestic price, expressed in U.S. dollars, of a basket of goods that would cost exactly one dollar in the United States. Consequently, values less than 1 indicate that prices in that country are relatively low, compared with the United States. Values greater than 1 indicate that prices in a particular country are relatively high, compared with the United States.

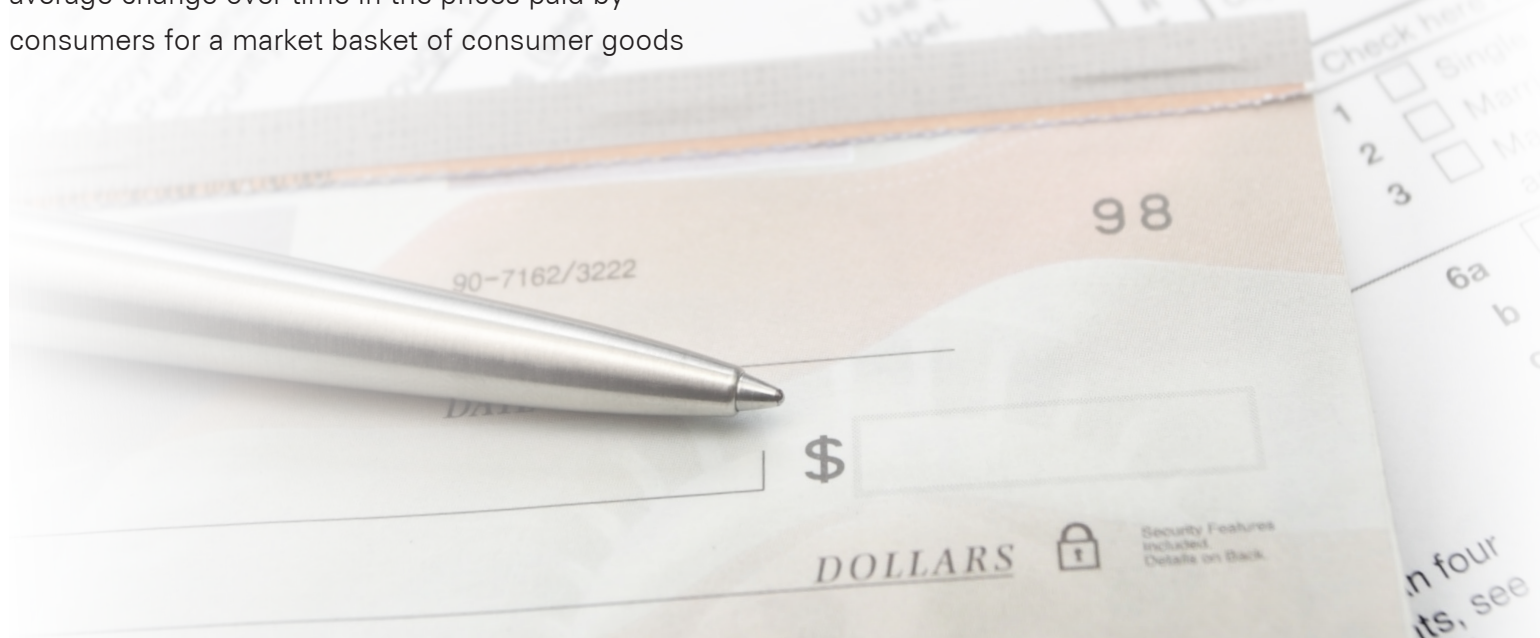
In chart 4.2, the periods 2000–2007 and 2007–2010 are selected to compare a time of global recession (2007–2010) against a prerecessionary time (2000–2007). The chart shows the average annual growth rate during each period. Although 2007 is included in both, it represents two different annual changes that do not overlap: 2006–2007 in the first period and 2007–2008 in the second period.

Definitions

Consumer price indexes (CPI) are a measure of the average change over time in the prices paid by consumers for a market basket of consumer goods

and services. CPI and annual percent changes are based on national CPI as published by each country. They have not been adjusted for comparability.

Harmonized indexes of consumer prices (HICP) are an internationally comparable measure of consumer price inflation based on European Union definitions. The index represents urban and rural households in each country and excludes the component for owner-occupied housing costs. **Purchasing power parities** (PPP) are currency conversion rates that allow output in different currency units to be expressed in a common unit of value. A PPP is the ratio between the number of units of a country's currency and the number of U.S. dollars required to purchase an equivalent market basket of goods and services within that country. **Compensation costs** refer to average hourly compensation costs for all employees in manufacturing. See section 3 notes. The price of a basket of goods that costs one dollar in the United States is known as the **relative price**. **Relative prices** are calculated by dividing PPP by market exchange rates. See the discussion of relative prices in Sources above. ■





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